

ORDER FOR SUPPLIES OR SERVICES

PAGE OF PAGES

1 36

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

1. DATE OF ORDER		2. CONTRACT NO. (If any) EP-C-12-054		6. SHIP TO:	
3. ORDER NO. 0010		4. REQUISITION/REFERENCE NO. See Schedule		a. NAME OF CONSIGNEE OW	
5. ISSUING OFFICE (Address correspondence to) (FOR U.S. MAIL ONLY) US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268				b. STREET ADDRESS US Environmental Protection Agency 26 West Martin Luther King Drive	
				c. CITY Cincinnati	e. ZIP CODE 45268
7. TO: DEBORAH ELLISON				f. SHIP VIA	
a. NAME OF CONTRACTOR R T I International				8. TYPE OF ORDER	
b. COMPANY NAME				<input type="checkbox"/> a. PURCHASE <input checked="" type="checkbox"/> b. DELIVERY	
c. STREET ADDRESS PO BOX 12194 (b)(4)				REFERENCE YOUR: Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
d. CITY RESEARCH TRIANGLE PARK				e. STATE NC	f. ZIP CODE 277092194
9. ACCOUNTING AND APPROPRIATION DATA See Schedule				10. REQUISITIONING OFFICE CPOD	
11. BUSINESS CLASSIFICATION (Check appropriate box(es))					
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB					
12. F.O.B. POINT Destination					

13. PLACE OF		14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) Multiple		16. DISCOUNT TERMS	
a. INSPECTION	b. ACCEPTANCE						

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: (b)(4) TECHNICAL SUPPORT FOR ASSESSMENT TMDL TRACKING AND IMPLEMENTATION SYSTEM (ATTAINS) UNDER THE WATER QUALITY FRAMEWORK The effective date of this task order is Continued ...					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.		17(h) TOTAL (Cont. pages)	
	21. MAIL INVOICE TO:							
	a. NAME RTP Finance Center						\$1,317,860.00	
	b. STREET ADDRESS (or P.O. Box) US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive						\$1,317,860.00	
c. CITY Durham						d. STATE NC	e. ZIP CODE 27711	17(i) GRAND TOTAL

22. UNITED STATES OF AMERICA BY (Signature)

► Noelle Mills

23. NAME (Typed)
Noelle Mills
TITLE: CONTRACTING/ORDERING OFFICER

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
2

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO. EP-C-12-054	ORDER NO. 0010
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>July 24, 2015. TOCOR: Dwane Young Max Expire Date: 03/27/2018 Admin Office: CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 Period of Performance: 07/24/2015 to 05/31/2016</p> <p>Base Period- Provide Services in accordance with attached Performance Work Statement entitled "Technical Support for Assessment TMDL Tracking and Implementation System (ATTAINS) under the Water Quality Framework." This Task Order award is a result of RFP PR-OW-15-00211</p> <p>LOE: 12,472 Award Type: Cost-plus-fixed-fee Total Estimated Cost: (b)(4) Fixed Fee: (b)(4) Term Form Requisition No: PR-OW-15-00524, PR-OW-15-00547</p> <p>Accounting Info: 14-15-B-87FM-202BD4XPQ-2505-LFTD0000-1 587ME5031-001 BFY: 14 EFY: 15 Fund: B Budget Org: 87FM Program (PRC): 202BD4XPQ Budget (BOC): 2505 Job #: LFTD0000 DCN - Line ID: 1587ME5031-001 Funding Flag: Partial Funded: \$69,552.84 Accounting Info: 15-16-B-87FM-202BD4XPQ-2505-LFTD0000-1 587ME5030-001 BFY: 15 EFY: 16 Fund: B Budget Org: 87FM Program (PRC): 202BD4XPQ Budget (BOC): 2505 Job #: LFTD0000 DCN - Line ID: 1587ME5030-001 Funding Flag: Partial Funded: \$832,000.00</p>				1,317,860.00	
0002	Option Period I- Provide Services in Continued ...					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$1,317,860.00

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
3

IMPORTANT: Mark all packages and papers with contract and/or order numbers.

DATE OF ORDER	CONTRACT NO. EP-C-12-054	ORDER NO. 0010
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ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>accordance with attached Performance Work Statement entitled "Technical Support for Assessment TMDL Tracking and Implementation System (ATTAINS) under the Water Quality Framework." This Task Order award is a result of RFP PR-OW-15-00211</p> <p>LOE: 12,911 Award Type: Cost-plus-fixed-fee Total Estimated Cost: (b)(4) Fixed Fee: (b)(4) Term Form (Option Line Item) 305 Days After Award</p>					
0003	<p>Option Period II- Provide Services in accordance with attached Performance Work Statement entitled "Technical Support for Assessment TMDL Tracking and Implementation System (ATTAINS) under the Water Quality Framework." This Task Order award is a result of RFP PR-OW-15-00211</p> <p>LOE: 7,199 Award Type: Cost-plus-fixed-fee Total Estimated Cost: (b)(4) Fixed Fee: (b)(4) Term Form (Option Line Item) 610 Days After Award</p> <p>Delivery: 1825 Days After Award</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

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SECTION B - Supplies or Services/Prices

B-1 Clauses

BASE PERIOD:

Local Clauses 1552.211-73 LEVEL OF EFFORT - COST REIMBURSEMENT TERM CONTRACT (APR 1984) DEVIATION (AUG 1985)

(a) The Contractor shall perform all work and provide all required reports within the level of effort specified below. The Government will order **12,472** direct labor hours for the base period which represents the Government's best estimate of the level of effort required to fulfill these requirements.

(b) Direct labor includes personnel such as engineers, scientists, draftsmen, technicians, statisticians, and programmers and not support personnel such as company management, typists, and key punch operators even though such support personnel are normally treated as direct labor by the Contractor. The level of effort specified in paragraph (a) includes Contractor, subcontractor, and consultant labor hours.

(c) Under any circumstances, if the Government orders or the Contractor provides less than 90 percent of the level of effort specified for the base period or any optional period exercised, an equitable downward adjustment of the fixed fee, if any, for that period will be made. The Government may require the Contractor to provide additional effort up to 110 percent of the level of effort for any period until the estimated cost for that period has been reached. However, this additional effort shall not result in any increase in the fixed fee, if any. If this is a cost-plus-incentive-fee (CPIF) contract, the term "fee" in this paragraph means "base fee and incentive fee." If this is a cost-plus-award-fee (CPAF) contract, the term "fee" in this paragraph means "base fee and award fee."

(d) If the level of effort specified to be ordered during a given base or option period is not ordered during that period, that level of effort may not be accumulated and ordered during a subsequent period.

(e) These terms and conditions do not supersede the requirements of either the "Limitation of Cost" or "Limitation of Funds" clauses.

(end of clause)

BASE PERIOD:

Local Clauses EPA-B-16-102 ESTIMATED COST AND FIXED FEE

(a) The estimated cost of this task order is (b)(4)

(b) The fixed fee is (b)(4)

(c) The total estimated cost and fixed fee is \$1,317,860.

BASE PERIOD:

Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractor's performance through 03/30/2016.

(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EPA-B-16-102), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

SEE RECAP

SECTION F - Deliveries or Performance

F-1 Clauses

Local Clauses EPA-F-12-101 PERIOD OF PERFORMANCE

The period of performance of this task order shall be from 07/24/2015 through 05/31/2016 inclusive of all required reports.

SECTION G - Contract Administration Data

G-1 Clauses

G-1 Local Clauses EPA-G-42-101 CONTRACT ADMINISTRATION REPRESENTATIVES

Task Order Contracting Officers Representatives (CORs)/Project Officers for this contract are as follows:

Dwane Young, TOCOR, 1200 Pennsylvania Ave., NW, Mail Code: 4503T, Washington, D.C. 20460 202-566-1214
young.dwane@epa.gov

Shera Reems, ATOCOR, 1301 Constitution Ave., NW, Mail Code: 4503T, Washington, DC 20460 202-566-1264,
reems.shera@epa.gov

Contracting Officials responsible for administering task order are as follows:

Noelle Mills, Contracting Officer, 26 W MLK Drive, Mail Code: NWD1, Cincinnati, OH 45268, 513-487-2171,
mills.noelle@epa.gov

Katie Rechenberg, Contract Specialist, 26 W MLK Drive, Mail Code: NWD1, Cincinnati, OH 45268, 513-487-2853, rechenberg.kathleen@epa.gov

NOTE: FEDCONNECT is the official method of correspondence with the Contracting Officer and Contract Specialist.

SECTION H – Special Contract Requirements

H-1 Clauses

EPAAR 1552.217-71 OPTION TO EXTEND THE TERM OF THE CONTRACT-COST-TYPE CONTRACT. (APR 1984)

The Government has the option to extend the term of this task order for 2 additional period(s). If more than 30 days remain in the period of performance, the Government, without prior written notification, may exercise this option by issuing a task order modification. To exercise this option within the last 30 days of the period of performance, the Government must provide to the Contractor written notification prior to that last 30-days of the period. This preliminary notification does not commit the Government to exercising the option. Use of an option will result in the following task order modifications:

(a) The "Period of Performance" clause will be amended to cover a base period and option periods:

Period	Start Date	End Date
Base Period	07/24/2015	05/31/2016
Option Period 1	06/01/2016	05/31/2017
Option Period 2	06/01/2017	03/27/2018

(b) Paragraph (a) of the "Level of Effort" clause will be amended to reflect a new and separate level of effort of:

Period	Level of Effort
Base Period	12,472
Option Period 1	12,911
Option Period 2	7,199

(c) The "Estimated Cost and Fixed Fee" clause will be amended to reflect increased estimated costs and fixed fee for each period as follows:

Period	Estimated Cost	Fixed Fee	Total CPFF
Base Period	(b)(4)	(b)(4)	\$1,317,860
Option Period 1			\$1,352,567
Option Period 2			\$ 821,806

(d) If the contract contains "not to exceed amounts" for elements of other direct costs (ODC), those amounts will be increased as follows: N/A

SECTION J - List of Documents, Exhibits and Other Attachments

J-1 List of Documents, Exhibits, and Other Attachments

Attachment Number	Title	Date
1	PWS ATTAINS Development v4	07/22/2015
2	Recap & IF	07/22/2015

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD

Base Period - 07/24/2015 through 05/31/2016

Funding Action	Est. Cost	Fixed Fee	Total CPFF
Initial Award	(b)(4)	(b)(4)	\$ 901,552.84
Total Funded			\$ 901,552.84
Total Per Contract			\$ 1,317,860.00
Balance Unfunded			\$ 416,307.16

**PERFORMANCE WORK STATEMENT
TSAWP IDIQ MULTIPLE-AWARD CONTRACT
SOLICITATION ID # PR-OW-15-00211
EP-C-12-054 TASK ORDER 0010**

**TECHNICAL SUPPORT FOR ASSESSMENT TMDL TRACKING AND IMPLEMENTATION SYSTEM
(ATTAINS) UNDER THE WATER QUALITY FRAMEWORK**

A. BACKGROUND:

The Office of Water has embarked on a multi-year effort called the Water Quality Framework (WQF) to better integrate existing data systems to support water quality managers and to streamline water quality assessment and reporting to provide a more complete picture of the nation's water quality. Under the WQF, the Assessment TMDL Tracking and Implementation System (ATTAINS) is the first system to undergo improvements, which supports state reporting under Clean Water Act Sections 303(d) and 305(b).

This assistance is in support of EPA's work related to the re-design of the ATTAINS system. The purpose of this effort is to re-design and develop ATTAINS to improve the tracking of state reported information under the Clean Water Act (CWA) Sections 303(d) and 305(b) Integrated Reporting process, which includes:

- Section 303(d) lists of impaired and threatened waters that need a TMDL;
- Section 305(b) assessment and attainment status of waters; and
- State-wide statistical survey assessments of the extent of waters supporting the goals of the Act as reflected in state water quality standards.
- Total Maximum Daily Loads (TMDLs)

In 2014, EPA engaged with States and Regions on several planning activities that focused on:

1. Data Elements and Schema: This workgroup defined the data elements and draft schema for exchanging Integrated Reporting information between the States and EPA.
2. Data Exchange Methodology: This workgroup developed recommendations on data exchange approaches and system design. EPA conducted a separate options analysis of technical options.
3. Performance Measures Evaluation: This workgroup evaluated the existing performance measures that can be reported on with Integrated Reporting data. This workgroup made recommendations on new approaches for how these measures can be reported and how the new ATTAINS system can be used to report on these measures.
4. Improved Assessment Methods: This workgroup evaluated tools and methods that can be used to discover monitoring data and automatically screen that data against water quality criteria.

The final reports are available as attachments to this PWS. These documents will provide information that will be needed for the contractor to conduct the work outlined in this task order.

The ATTAINS data system supports state reporting under CWA Sections 303(d) and 305(b). Beginning with the 2002 Integrated Reporting cycle to date, EPA recommended that states not only submit to EPA hard copy Integrated Report, but also the associated tabular and geospatial data. Due in part to the increased emphasis being placed on electronic reporting, the CWA Sections 303(d) and 305(b) programs have embarked on the ATTAINS redesign to fully transition states to electronic reporting by the 2018 Integrated Reporting cycle.

This transition will occur in two phases. Phase 1 will implement the recommendations from the data elements and schema and data exchange methodology workgroups by April 2016 in order for the new system to be ready for states to be able to test following their submissions for the 2016 Integrated Reporting cycle. Once Phase 1 is

fully implemented, EPA will begin to identify if any improvements or modifications need to be made to the system in order for a complete transition of all 56 states and territories for the 2018 Integrated Reporting cycle.

Over the past few years, some components of ATTAINS have been upgraded to use the APEX software. Table 1 lists the major components of ATTAINS. Despite these improvements, the ATTAINS system does not currently meet the needs of EPA under the Water Quality Framework.

Table 1 – ATTAINS components

ATTAINS Component ¹	Description/Purpose	Planned Status Under the New ATTAINS System
Assessment Database (ADB): http://www.epa.gov/waters/adb/	A distributed database that states may use to track and report their assessment decisions under CWA Sections 303(d) and 305(b). http://www.epa.gov/waters/adb/	Decommission and Replace with ATTAINS Cloud Interface
ADB Compatible Excel Spreadsheet	An Excel spreadsheet used by states that use their own internal database to track assessment decisions.	Decommission
OWIR-ATT Flow	CWA Sections 303(d) and 305(b) Exchange Network Flow	Decommission and Replace with new ATTAINS Exchange Network flow
ATTAINS Web Express: https://ofmext.epa.gov/apex/waters10_shire/f?p=208:2:1072095077752::: <ul style="list-style-type: none"> • Attribute Data Submission Form • GIS Data Submission Form • NTTS Data Entry Tool • State-wide Statistical Survey Web Data Entry Tool 	The ATTAINS Web Express is divided into two sections: Data Submission. This application is intended for States and Regions to use to submit data to EPA.	Decommission and Replace as part of the ATTAINS redesign. This includes the following subcomponents: Attribute and GIS Data Submission Forms NTTS Tool – design should build existing NTTS into ATTAINS system, but slight modifications likely necessary based on workgroup discussions State-wide Statistical Survey Tool – design should build this tool into ATTAINS System

¹ These components relate to the tabular data in ATTAINS. As part of the CWA 303(d) and 305(b) submissions, states also submit geospatial information to identify the location of assessment decisions. EPA recently completed an Integrated Reporting Georeferencing Pilot, which identified catchment-based indexing as the direction that EPA will move to use for analytical purposes. State submitted geospatial information would be used for display purposes.

ATTAINS Component ¹	Description/Purpose	Planned Status Under the New ATTAINS System
ATTAINS Database and Website: http://www.epa.gov/waters/ir	ATTAINS includes state-reported information, required under Clean Water Act (CWA) Sections 303(d) and 305(b), regarding state assessment of the support of designated uses in assessed waters, identified causes and sources of impairment, identified impaired waters including their location, Statewide Statistical Survey information, and Total Maximum Daily Load (TMDL) status.	Update to provide an integrated view of EPA data as described in this PWS.
AskWaters Simple and Expert Query Views for 303(d) and 305(b)	Queries designed for users to download 303(d) and 305(b) information, as well as TMDLs into a an excel spreadsheet for use.	Update as appropriate based on changes to the ATTAINS database structure and integrate with new ATTAINS public web site and ATTAINS Cloud interface.
Web Services	The Office of Water mapping services that provide access to geospatial data stored in the Reach Address Database (RAD).	Update to account for changes to the ATTAINS system.
ATTAINS 303(d) and 305(b) Review Website	A website where states and Regions can review the state submitted 303(d) and 305(b) data prior to releasing the information to the public	Decommission

B. SCOPE

The contractor shall provide support to the EPA Task Order Contracting Officer Representative (TOCOR) under contract level tasks 2.3.1.8, 2.3.1.9, 2.3.5.8, and 2.3.5.9 to plan, manage, design, and, develop the ATTAINS system consistent with the outcomes of the planning activities in the Background section² to meet the needs of EPA and in support of the Integrated Reporting process. The ATTAINS system will be designed and developed in such a way that it can be hosted in an EPA environment. The contractor shall also provide technical support, training support, and outreach for the redesigned ATTAINS system.

Technical Direction may come from the EPA TOCOR or the Alternate TOCOR if the TOCOR is on leave or travel, the PO, or the CO.

C. TASKS

Task 1 – Project Plan/Task Order Management

The contractor shall manage this project in accordance with the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) or PProjects IN Controlled Environments Version 2.0 (PRINCE2). The contractor shall develop artifacts and shall use the Enterprise Project Management Environment (EPM) or a similar PM tool as directed by the TOCOR as the primary project management and reporting tool. EPA has implemented a scheduling environment using Microsoft Project Professional 2010 and Project Server 2010. All

² As part of another EPA contract, the following components are being developed: 1) Exchange Network XML schema, 2) flow configuration document, and 3) ATTAINS table structure.

final versions of project management artifacts, including project charter, project plan, work breakdown structure, schedules, and other artifacts, shall be stored in EPM unless otherwise directed by the TOCOR.

The contractor shall use an Agile software development approach for developing the components of the ATTAINS system. Due to the nature of the Agile software development process, the contractor shall periodically (at least quarterly) review the project status and resolve higher level task “placeholders” into more discrete and detailed tasks, or “sprint plans”. These tasks will correspond to the development sprints and the business requirements and themes appearing in the product backlog (or “Master to do List”). The contractor shall review the sprint plans with the TOCOR, and, upon approval by the TOCOR, update EPM and necessary project artifacts and begin enacting the plan. In addition, the Agile development approach uses tools such as velocity charts, burn down charts, and other artifacts to update stakeholders of software development progress. The project must be managed to produce incremental releases of the new ATTAINS software at least every six (6) months once development begins.

During the course of the project, adjustments may be needed to improve stakeholder interpretation of the information given in these tools. Thus, the contractor may recommend to the TOCOR adjustments to these tools. Upon approval of the recommendations by the TOCOR, the contractor shall begin using the new tools or new versions of the tools to communicate progress.

The project shall provide for regular communication between EPA team members and contractor staff. The contractor shall participate in weekly status meetings, and monthly Change Control Board (CCB) meetings. The contractor shall also use other mediums and material to support regular communication with EPA and other project stakeholders.

For all system development, the contractor shall plan for three separate environments for systems to be deployed in. First, the contractor shall maintain a development environment that is accessible only to EPA, the Design Team, and the contractor, and is used for the development of all software components. The development environment shall be hosted at the contractor facility unless otherwise directed by the TOCOR to use an EPA Cloud-hosted development environment. A pre-production environment will allow for testing by both EPA and the states. The pre-production environment will be hosted by EPA at either the National Computing Center (NCC) or in an EPA approved cloud environment. Finally a production environment will be used by EPA and the states for all production-level data, and will also be hosted by EPA at either the NCC or in an EPA-approved cloud environment. The supporting software frameworks shall be identical across all environments. New frameworks may be tested by the contractor in the development environment, upon approval of the TOCOR and OW’s Information Management Official. Mechanisms shall be established to ensure that data available in the production environment are also available in the pre-production environment to ensure that states have adequate data upon which to perform testing. Security on all platforms shall follow standard federal security practices as outlined by EPA and documented in the EPA General Support System Security Plan. System components shall comply with Section 508 of the Rehabilitation Act.

For all deployments at EPA, the contractor shall check in all code to the Office of Water’s Team Foundation Server (TFS) or other EPA approved code repository environment (as directed by the TOCOR) and link all code packages to appropriate test cases which are also to be stored in TFS. The contractor shall also follow the Application Deployment Checklist (ADC) process and provide materials necessary deploying applications at EPA.

Task 2 – Quality Assurance/ Quality Control

The contractor shall adhere to the Contract-level Quality Management Plan (QMP) in performing the scope of requested services in this task order

In addition to adhering to the QMP, EPA has determined a Quality Assurance Project Plan (QAPP) will be required for this task order. The QAPP shall contain references to the appropriate sections of the contract level QMP, as well as include relevant Standard Operating Procedures (SOPs), checklists, or other QA guidance, that will be followed to complete this task order.

Additional QA Documentation Required

All major deliverables (e.g., Technical Support Documents, Study Reports, Study Plans, etc.) produced by the contractor under this Task Order shall include a discussion of the QA/QC activities that were or will be performed to support the deliverable.

The contractor shall immediately notify the EPA TOCOR in writing of any QA problems encountered that may impact the performance of this Task Order, with recommendations for corrective action.

The contractor also shall provide EPA with monthly written reports of QA-related activities performed during implementation of this Task Order (see Section D “Reporting” below). These monthly written QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the QMP, SOPs, checklists, or other QA guidance, and corrective actions taken. The contractor may include this as a part of the required monthly financial/technical progress report required by the contract (see Section D “Reporting” below).

This project is an IT system development project, and as such has unique QA requirements. The PWS requires the following QA Reports that will be reviewed by EPA as a mechanism to ensure that the product being delivered meets the requirements specified by EPA:

- a) The contractor shall deliver reports outlining the outcomes of testing as part of the Test Plans supporting system development activities described under Tasks 4, 5, 6, and 7
- b) The contractor shall provide the outputs from Integration Testing, ensuring that components all work with one another
- c) The contractor shall provide a running list of issues and potential enhancement requests
- d) The contractor shall provide a written report of any logic and code reviews; and upon TOCOR request, provide the code for EPA review

In addition to this, EPA will conduct periodic code reviews to ensure that the logic being implemented by the contractor meets the requirements of EPA.

The QAPP shall also contain SOPs and QA procedures for any data migration conducted under Task 8 as well as catchment-based data processing conducted under Task 10.

Only tasks 1 and 3 can begin prior to approval of the QAPP. In addition, deliverables that can be initiated prior to an approved QAPP are indicated with a “*” in the list of deliverables. Everything else requires a QAPP that has been approved and signed by EPA QA staff before work can be initiated.

Task 3 – “Kick Off” meeting

Prior to beginning work on this task order, the TOCOR shall schedule a kick-off meeting with the contractor to discuss the tasks within this task order, the goals of this task order, and to review the schedule of benchmarks, deliverables, and milestones. The contractor should plan for one full-day trip for four people to Washington, DC for this kick-off meeting.

Task 4 – ATTAINS Exchange Network Components

The Exchange Network provides a means for states to submit data directly from their databases to EPA via a pre-defined and agreed upon format. The Exchange Network also provides methods for states to retrieve data from EPA data systems to keep their databases in sync with EPA systems. This is all accomplished through agreed-upon web services and XML schema (more information on the Exchange Network is available at: <http://www.exchangenetwork.net>). The ATTAINS system will provide the ability for states to both submit data to EPA and retrieve data from EPA via the Exchange Network. These methods would be available for states that have their own data systems for tracking 303(d)/305(b)/TMDL data, and who are not using the ATTAINS Cloud system. EPA has initiated an Integrated Project Team (IPT), which consists of state and EPA staff to finalize the ATTAINS XML schema and the data exchange template (current draft versions of these items are included as attachments to the PWS). The IPT will also draft the Flow Configuration Document (the instruction document for how to use ATTAINS in the Exchange Network). As part of this task order, the contractor shall review the final ATTAINS schema, as agreed to by the IPT, as well as develop all of the software components needed to allow the ATTAINS data flow to function. Design considerations for the data flow can be found in the Workgroup 2 document (attached), but at a minimum, the data flow will support the following Exchange Network services: Submit, Query, and Solicit. The data flow shall also be designed in such a way so that the data flow can be automated, with automated data loading, validation, and notification. The functionality shall be similar to the Water Quality Exchange (WQX). The Flow Configuration Document for WQX is available at: http://www.exchangenetwork.net/schema/WQX/2/WQX_FCD_v2.1b.pdf.

The following components shall be developed to enable the ATTAINS Exchange Network flow:

1. **Business Rule Engine:** The contractor shall make use of Commercial off the Shelf (COTS) software (such as DROOLS) to implement a rules engine that will validate data being submitted to ATTAINS. The rules engine shall provide an easily modifiable mechanism for updating or changing rules that incoming data must meet in order to be successfully loaded into the ATTAINS system.
2. **Rules Registry:** The contractor shall maintain a list of business rules that are applied by the ATTAINS system.
3. **ATTAINS Node for interacting with EPA’s Central Data Exchange (CDX) node:** This node functions as EPA’s internal node that can interact with CDX. It shall be built on top of existing node software and utilize the Next Generation Node (NGN) as its base unless otherwise directed by the TOCOR.
4. **Data parsing and loading module:** This module shall be able to parse the incoming XML files and load that data into staging tables where the business rules engine can validate the data.
5. **Staging Tables Database:** This database will serve as the temporary storage for incoming data. Once data are validated, the data would then be automatically pushed to the ATTAINS database.
6. **Exchange Network Query and Solicit Services:** These services will provide the ability for states to extract data from the ATTAINS system. They will provide access to all of the data types identified in the ATTAINS schema and will produce results that match the ATTAINS schema.

For the components identified above (with the exception of the rules registry), the contractor shall maintain a list

of prioritized requirements, and shall identify which requirements are addressed in each iterative release. Each iteration will be considered a 'beta' release with the final iteration being version 1.0.

For the base period, the contractor shall plan to deliver all of the components identified above as version 1.0 of the ATTAINS data flow, and should plan for three iterative releases within the base period. In option period 1, after a brief learning period from version 1.0, the contractor shall plan for an additional 3 iterations of development, resulting in a final release of the ATTAINS system as version 1.1. In option period 2, the contractor shall perform operations and maintenance on the Exchange Network components of ATTAINS as directed by the TOCOR

The contractor shall also compile the final packages of the schema and supporting documents, including the final Flow Configuration Document for review by the EN Network Technology Board (NTB). The contractor shall finalize the Flow Configuration Document, perform validation checks on the ATTAINS schema, and develop example XML files for posting to the Exchange Network site: <http://www.exchangenetwork.net/data-exchange/assessment-tmdl-tracking-and-implementation-system/>.

During the base period, the contractor shall plan to use the ATTAINS schema that is being developed by EPA and the IPT. The contractor shall plan to finalize the Flow Configuration Document that will be drafted by the IPT and shall develop the example XML files. These files will comprise version 1.0 of the ATTAINS data flow. In option period 1, the contractor shall plan to update all of these files as directed by the TOCOR, and shall plan to finalize these files and documents as part of version 1.1 of the ATTAINS data flow. EPA does not envision any additional changes to the ATTAINS data flow for option period 2.

Although Agile development is the preferred method of development for the software components identified in this PWS, the components identified in this task may not lend themselves to an Agile approach. The contractor shall prepare a recommended development approach for the components in this task that provides a best attempt at delivering incremental functionality at least every six months. Upon approval from the TOCOR, the contractor shall proceed with development under this task.

Task 5 – ATTAINS Database

The contractor shall develop a database for storing data from 303(d), 305(b), TMDLs, state statistical survey conclusions, National Aquatic Resource Survey conclusions, TMDL Alternatives, Protection Plans, Priorities, strategic measures, and other information related to Integrated Report. The database shall be designed such that it can serve as the system of record for final 303(d) lists, approved TMDLs, and strategic measures. It shall also be designed such that it can automatically calculate the strategic measures based on the underlying data in the database (see attached Workgroup 3 report for a discussion on the measures related to ATTAINS). EPA envisions that many states will use the ATTAINS system as their system for tracking all of this information, and EPA Regions will use the ATTAINS system for reviewing and approving 303(d) lists and TMDLs. The database shall be designed such that states can work on draft data in a secure environment where only the state staff can view the data. The database shall also be able to support historical ATTAINS data as well as all of the data as defined by the new ATTAINS schema (defined in Task 4). Additional requirements and data elements for the ATTAINS database are available in the attached Workgroup 1 and Workgroup 2 documents.

To ensure understanding of the new ATTAINS data model, the contractor shall develop an Entity Relationship Diagram of all the proposed ATTAINS data tables with their corresponding fields and relationships. The contractor shall also demonstrate how all of the data elements in the schema map to the corresponding data elements in the database.

The contractor shall also develop a proposed security approach for ensuring that data integrity is maintained and that allows states to choose at which points data are shareable with EPA. In addition to this proposed security

approach, the contractor shall develop a proposed approach for reporting data, archiving data, and ensuring that the system can act as the ‘system of record.’ Although EPA does not envision that the system will require electronic signatures, there are other Cross Media Electronic Reporting Rule (CROMERR) services that may be re-usable to meet this requirement, and the contractor shall re-use existing EPA components or services under the direction of the TOCOR. One major consideration is that once data are officially approved by EPA, they cannot change, and that approved dataset becomes an official record that must be reproducible.

Finally, the contractor shall develop a database as directed by the TOCOR. The database shall be developed such that it can be deployed at the National Computing Center (NCC) or in an EPA approved cloud environment. For planning purposes, the contractor shall plan on the database being designed for the Oracle Enterprise platform, however, PostgreSQL may be an option, depending on what may be supported in EPA’s Cloud environment. The version of Oracle or PostgreSQL will be determined by the TOCOR prior to the contractor beginning work on this task.

The contractor shall plan to deliver version 1 of the database during the base period. Version 1.1 of the database shall be delivered in option period 1. The database shall be updated in coordination with the iterative releases of the ATTAINS Cloud Interface. During option period 2, the contractor shall perform operations and maintenance on the database.

Task 6 – ATTAINS Cloud Interface

The contractor shall use a use a modified version of the SCRUM Agile development approach to incrementally and iteratively develop, test, document, and deploy the new ATTAINS Cloud Interface into a development and preproduction environment. The goal is to deliver Initial Operational Capability (IOC) by December 2015 and Full Operational Capability (FOC) by April 2016. For the purposes of this effort, IOC means that the new ATTAINS system has been built-out and has the functionality specified in the Product Backlog that EPA considers equivalent to ATTAINS and the state Agencies can begin transitioning to the new ATTAINS system, but that the new ATTAINS system will not be fully tested. FOC means that the contractor shall deliver the new ATTAINS functionality specified in the Product Backlog that EPA considers equivalent to ATTAINS that is fully tested. The April 2016 release will be considered version 1.0 of the ATTAINS system. Version 1.1 will follow a similar development approach with IOC by December 2016 and FOC by April 2017. Version 1.0 will be developed in the base period, and version 1.1 will be developed in option period 1. The contractor shall perform operations and maintenance on the system in option period 2.

EPA will initiate a Design Team that consists of state and Regional staff to provide insight and input to the design of the system. The Design Team will act as a resource to provide input and use cases to the contractor on the design and functionality of the system, especially during Sprints.

The contractor shall evaluate the requirements defined in the Workgroup 2 document, convert those requirements into a product backlog, and work with the TOCOR and the Design Team to prioritize the requirements. Once the requirements are prioritized the contractor shall work with the Design Team and TOCOR to develop use cases and screen mock-ups. Following the input from the Design Team, the contractor shall develop the functionality to meet the requirements of the use case. For the base period, the contractor shall plan for four incremental updates of the software, with the last update being at FOC. For option period 1, the contractor shall plan for four incremental updates of the software, with the last update being at FOC.

In addition to these iterations, the contractor shall develop a proposed approach for user provisioning and authentication as well as a proposed approach for integrating geospatial data into the interface. The Central Data Exchange Identity Services could be re-used to meet this requirement, and the contractor shall evaluate their feasibility to meet the needs of the system. The contractor shall use EPA shared services where available and per the direction of the TOCOR. This may include the Geoplatform, EPA Identity Services, and any other shared

service as directed by the TOCOR. These proposed approaches shall be developed during the base period, and updated in subsequent option periods as directed by the TOCOR.

Task 7 – ATTAINS Public Web Site

One of the goals of the ATTAINS system is to provide public access to Integrated Reporting and TMDL data that are provided by the states and Regions. The current ATTAINS public web site made some great strides in better displaying the data and making the data available for download (see <http://www.epa.gov/waters/ir> and http://iaspub.epa.gov/apex/waters/f?p=ASKWATERS:MAIN_MENU:0). As part of the Water Quality Framework, the ATTAINS public website will be integrated more directly with other relevant EPA data sets (i.e. STORET/WQX, NHDPlus, and the National Aquatic Resource Surveys (NARS); see the attached Water Quality Framework factsheet for more information). The ATTAINS public website will also be updated to reflect the changes that will result from the redesign of the ATTAINS system. The new ATTAINS public site will also provide an interactive interface for the NARS data (see the fact sheet: http://water.epa.gov/type/rsl/monitoring/riverssurvey/upload/NRSA200809_FactSheet_Report_508Compliant_130314.pdf as an example of the type of information that would be available on this site). This interface shall be interactive, and allow a user to explore the findings of the surveys. The vision for the new ATTAINS site is that it would provide a common interface that allows the public to navigate the National Survey data, then explore the state-scale survey data, and then explore the site specific data that is coming from the Integrated Reports. The contractor shall develop the new website to follow EPA's web guide available at: <http://www2.epa.gov/webguide>.

Using a SCRUM Agile development approach, the contractor shall work with the TOCOR to compile a list of requirements for the public ATTAINS site. These requirements will be entered into a product backlog, which will then be prioritized by the TOCOR. This backlog will be used to guide the development of the site. During the base period, the contractor shall compile the list of requirements and provide a proposed approach for TOCOR review and approval. During option period 1, the contractor shall implement the new ATTAINS public web site. The site will be hosted at EPA, and shall be designed so that it is compatible with EPA's web content management system (Drupal).

The new public web site will provide interactive reports as well as data download capability, similar to that of the existing AskWaters application. The new website will also provide an application program interface (API) that will provide access to the ATTAINS data via web services. These web services shall be designed in option period 1, and shall be developed in option period 2. The contractor shall plan for four iterative releases in both option period 1 and option period 2.

Task 8 – State Transition Support and Training

The contractor shall provide training and transition support to the states. The goal of this support is to provide assistance to the states so that all 56 states and territories³ are transitioned to the new ATTAINS system by April 2018. Some states will make the transition on their own with only minimal training support. Other states may need more direct support. As states adopt the ATTAINS system, training will also need to be provided to support those states in using the new system. In support of this task the contractor shall plan on the following 2-day trips for 2 people as follows:

Base Period:

- Salem, OR
- Chicago, IL

³ The 56 states and territories include all 50 states, the District of Columbia, U.S. Virgin Islands, Puerto Rico, the Commonwealth of the Northern Mariana Islands, and American Samoa.

- Denver, CO

Option Period 1:

- Little Rock, AR
- Atlanta, GA
- Chelmsford, MA
- Seattle, WA

Option Period 2:

- Dallas, TX
- Philadelphia, PA
- San Francisco, CA
- Kansas City, KS

Subtask 8.1 – Training

The contractor shall develop training materials for the ATTAINS Cloud interface. These materials will include a user guide, and also materials that would support classroom training. The contractor shall evaluate and make recommendations for both a classroom training and an online training. The contractor shall draft online help accessible via the ATTAINS Cloud interface. The online help and training materials shall be available upon the release of ATTAINS version 1.0, with the materials being subsequently updated for ATTAINS version 1.1. The contractor shall also conduct trainings as directed by the TOCOR. Training could occur for any of the trips identified above. In addition to these trips, the contractor shall plan for 2 online training classes during the base period and 5 online training courses during each of the two option periods. For all of the webinars, EPA will provide access to the webinar software (Adobe Connect) and the call-in number that participants can use.

Upon completion of the training, the contractor shall distribute a questionnaire to the attendees to gauge the effectiveness of the training. The questionnaire may be in paper form or (preferably) using a web-based survey tool. Results of the questionnaire will be provided to the TOCOR.

The contractor shall develop the course feedback survey and submit the survey to the TOCOR for approval. The contractor shall continue to use the survey, unless modifications are directed by the TOCOR, for any future training.

Subtask 8.2 – Transition Support

Due to the complexity of transitioning 56 states and territories to the new ATTAINS system, EPA desires to begin transition planning as early as possible. It is EPA's intention to consider the states in groups, with the intention to fully transition all states by April 2018.

Upon direction from the TOCOR, the contractor shall develop a strategy and a plan for moving states to the new ATTAINS system. The plan may involve developing and delivering training specific to the states' to ease the transition to the new ATTAINS system and meeting with state personnel to determine transition requirements. The plan will include a schedule and estimated contractor support costs for providing transition support services. Meetings with states should be by conference call or web meeting, but may also occur as part of the planned travel under Task 8 above as directed by the TOCOR.

Upon plan approval and direction from the TOCOR, the contractor shall execute the plan and work with the appropriate contacts as identified in the plan.

The first group of states will consist of those states that have volunteered to pilot the new ATTAINS system in 2016. EPA expects 6-8 states to participate in the pilot. These states will likely also be Design Team members. There are several areas of technical support needed by states during the pilot. The contractor shall provide technical support to the states participating in the pilot. This support includes answering questions related to ATTAINS capabilities, interfacing applications used by the states, data migration, or software configuration settings for ATTAINS, as well as other questions relating to the technical implementation of ATTAINS. Support for the pilot states will be completed during the base period.

For interfacing applications, the contractor shall explain to participants in the pilot how the data exchanges work, what data exchanges are planned and those available for use. The contractor shall not modify any state interfacing applications, but by participating in system demos, webinars, and conference calls, the contractor shall provide guidance on how an interfacing application can consume the data provided through an ATTAINS data exchange.

The contractor shall prepare and deliver a Lessons Learned report to the TOCOR. This report will help guide the design/development of ATTAINS version 1.1.

Following completion of the pilot, the second group of states will consist of early adopters. An estimated 5 to 10 states will serve as the ATTAINS early adopters. Unlike the Pilot where the states test aspects of transitioning to the ATTAINS system without actually moving to the new system, early adopters will complete the move to the ATTAINS system. These early adopters require contractor technical support to assist and troubleshoot a complete transition to the ATTAINS system. As part of the task and at the direction of the TOCOR, the contractor shall, working with each early adopter, develop a transition plan that includes, at a minimum, a transition schedule and an assessment of the state's technical readiness to perform the transition. The contractor shall identify any necessary modifications to the state's interfacing applications to allow data exchange with the new ATTAINS system. Support for the early adopters will be completed during option period 1.

The third group of states will consist of the remaining states that have not yet transitioned to the new ATTAINS. The contractor shall develop a list of remaining states along with a prioritization schedule for transitioning those states to the new ATTAINS. Support for the third group will be completed during option period 2.

In addition to the work identified above, the contractor, upon direction by the TOCOR, shall develop tools to assist states in moving to the ATTAINS system. These tools could consist of spreadsheets, PL/SQL scripts, programming code, or other tools designed specifically to facilitate migrating data to ATTAINS. The contractor may also be directed to provide technical support in assisting states in using the tools or migrating data to the ATTAINS system. It is expected that this support will be provided at a minimum to pilot participants as described above.

During the base period, as part of this effort, the contractor shall develop a node plug-in for the new ATTAINS Exchange Network flow. This plug-in shall work with the OpenNode2, and provide the means for states to submit data via the Exchange Network using the ATTAINS 1.0 schema. Following the implementation of the node plugin, the contractor shall evaluate other node implementations to see if similar functionality needs to be created for those implementations (i.e. Next Generation Node). At the conclusion of the base period, the contractor shall make recommendations for additional node plugins. During option period 2, the contractor shall update the OpenNode2 plugin to be compliant with version 1.1 of ATTAINS.

The contractor shall also migrate existing ATTAINS data to the new ATTAINS data model. The contractor shall evaluate the existing data and identify any needed corrections for the data to meet the data validation requirements of the new system. Any corrections that cannot be made will be identified and noted in the system. This evaluation and migration shall include all of the data from NTTS as well as the Integrated Reporting data in the current ATTAINS system. The contractor shall also enter the existing NARS summary information from the

prior national surveys. The information that would be entered would be the information that is currently available on the survey fact sheets (these fact sheets can be found at http://water.epa.gov/type/watersheds/monitoring/aquaticsurvey_index.cfm).

The contractor shall also create and maintain a community forum page where states can ask questions related to the new ATTAINS system. The contractor shall create and maintain a Frequently Asked Questions page that will be accessible by transitioning states. This community forum shall be deployed as part of the new ATTAINS system. The community forum shall be available at the same location as the ATTAINS Cloud Interface, and available through the same user authentication as the Cloud Interface.

Task 8.3 Conference Attendance and Participation

When necessary, the TOCOR will authorize travel for the contractor to attend out of town meetings (such as the Exchange Network Meeting). The contractor shall submit a trip report describing its participation in conference activities. For planning purposes, the contractor shall plan for the following trips:

Base Period:

- Philadelphia, PA (1 person for 3 days) – Exchange Network Meeting
- Denver, CO (1 person for 4 days) – AWRA National Meeting
- Tampa, FL (1 person for 5 days) – National Water Quality Monitoring Conference

Option Period 1:

- Chicago, IL (1 person for 3 days) – meeting to be determined by the TOCOR

Option Period 2:

- Philadelphia, PA (1 person for 3 days) – Exchange Network Meeting
- Salt Lake City, UT (1 person for 5 days) – National Water Quality Monitoring Conference (location not yet determined, but use Salt Lake City for cost estimation purposes)

Task 9 – Support for Performance Measures Reporting

EPA has released a new 303(d) program vision (see <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/programvision.cfm>). As part of this new vision, EPA has developed new performance measures that will rely upon the data contained in the ATTAINS system. Because these measures are new, EPA will be working on approaches for communicating these measures to the states and the public. States also will need assistance implementing these new measures, and ensuring that they have sufficient data to support the calculation of these measures. In addition to these new 303(d) program measures, EPA is evaluating new approaches for measuring progress on a number of other water quality measures. EPA has developed draft concepts for these new measures (see attached Workgroup 3 report), and is planning on following a similar approach as to what is being used for the 303(d) program measures.

The contractor shall support EPA in evaluating state data and developing automated procedures for calculating the measures associated with the ATTAINS data. This would include support for existing measures related to the 303(d) program (WQ-27 and WQ-28), piloting new approaches for water quality measures (new measures for SP-10 and SP-11), providing data stores for existing measures based on national and state statistical surveys (SP-13 and WQ-29), as well as evaluate opportunities for integrating other measures within ATTAINS (which may include, upon direction from the TOCOR, SP-

12, WQ-10, and relevant Urban Waters measures). More information on these measures can be found at: http://water.epa.gov/resource_performance/planning/FY-2015-NWPG-Measure-Definitions-Water-Quality.cfm.

EPA plans for the ATTAINS system to be the system of record for these water quality measures, and the contractor shall develop approaches that allows for these measures to not only be stored within the ATTAINS system, but also be discoverable via the ATTAINS public web interface. These measures shall be calculated automatically based on the data entered in the ATTAINS system, and states and Regions shall have the ability to verify and visualize the output.

The contractor shall also provide support to the states as directed by the TOCOR to develop the data necessary to report on these measures. This support could include the development of priority areas (in support of WQ-27), developing GIS layers for states that don't have GIS capability, and providing scenario builder tools to allow states to develop targets and commitments for each of these measures. For the base period, the contractor shall plan to provide support to 45 states in developing their priorities (no more than 8 hours per state) and shall also provide support for 4 states to develop geospatial data. In option periods 1 and 2, the contractor shall plan to provide support to 10 states in developing their priorities and shall also provide support for 4 states to develop geospatial data for each option period.

Task 10 – Support Catchment Based Indexing

Geospatial data is of critical importance to EPA in understanding the data in the ATTAINS system. Historically, EPA has processed state geospatial data to the 1:100,000 scale NHDPlus stream network. This has been a fairly time-consuming process. In 2015 EPA will complete development for a new tool that will automate the mapping of state geospatial data to the NHDPlus catchments. This Catchment Indexing Process (CIP) Tool provides a much more streamlined approach for indexing state data to the NHDPlus, and also provides a common framework upon which EPA can calculate the measures discussed above. EPA is also developing a QA tool that will allow for QA/QC of output for the CIP tool prior to the finalization of the data. In initial testing, EPA is already seeing significant improvements in processing time for the processing of state data.

The CIP tool is developed using PostGreSQL with PostGIS and a Python interface. Contractors shall host the PostGreSQL database as well store the NHDPlus v2 in the database. The QA tool is being designed as a web based tool running against the PostGIS server with a Django web services tier (<http://www.django-rest-framework.org/>) and a leaflet web interface (<http://leafletjs.com/>). The QA tool would also be hosted by the contractor. Upon direction from the TOCOR, once an EPA cloud environment is available, these tools will be migrated to the cloud environment, and the contractor will interact with these tools in the cloud environment.

Under this task order, the contractor shall provide operations and maintenance support for this tool. This shall include hosting the tool in the contractor environment, processing state data, performing QA on that data, packaging up data for delivery to the Reach Address Database (RAD), and performing minor corrections or changes to the CIP and QA tools. The contractor shall also process historical state data through the CIP to provide a baseline for measures reporting.

The contractor shall develop Standard Operating Procedures (SOPs) for verifying, processing, and performing QA on state data both before and after processing. These SOPs shall be referenced in the QAPP and kept current to reflect best practices as the contractor learns from processing the data.

For planning purposes, for the base period the contractor shall plan to process and QA one national data set: the

national layer of waters with TMDLs as well as 56 state ‘priority’ and 303(d) baseline data sets. The contractor shall also plan to process and QA any incoming 2014 Integrated Reporting geospatial datasets (for planning purposes, plan for 15 state GIS data set). For option period 1, the contractor shall plan to process and QA any 2016 Integrated Reporting data for an additional 56 state data sets. For option period 2, the contractor shall plan to process 20 state data sets. All final data shall be delivered to the RAD in a format that will be specified by the RAD team. The contractor shall deliver the catchment-based events as well as the original state GIS data in a standard format that will be defined by the RAD team and approved by the TOCOR.

C. SCHEDULE OF BENCHMARKS, DELIVERABLES & MILESTONES:

BASE YEAR (July 24, 2015-May 31, 2016):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Project Charter	Within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Project Management Plan	Within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Baseline schedule for the project and any updated schedules	Baseline schedule within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR
1*	Risk and issues registers	Within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR
1*	Architecture diagram outlining the architecture of the entire ATTAINS system (version 1.0)	Within 20 business days of receiving technical direction from the TOCOR
1*	Process Diagram	Within 20 business days of receiving technical direction from the TOCOR
1*	Use Case Definitions (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR
1*	Lessons Learned	Within 10 business days of receiving technical direction from the TOCOR
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly
1*	Monthly Change Control Board Meetings	Monthly
1*	Weekly status meeting	Weekly

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
2*	Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of award
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR
2	Notification that changes are warranted related to QA	Within one business day of occurrence
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR
3	Kick-off meeting for Task Order	Within 10 business days of award or as otherwise directed by the TOCOR
4*	Exchange Network node workflow requirements and design document v1	Within 20 business days of receiving technical direction from the TOCOR
4*	Recommended development approach	Within 20 business days of TOCOR acceptance of the requirements and design document
4	Business Rule Engine v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.
4	Rules Registry v1	Initial rules registry due within 20 business days of acceptance of the development approach and an updated rules registry is due within 15 business days following the release of an iteration.
4	ATTAINS Node v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
4	Parse and Load Module v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.
4	Staging Tables Database v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.
4	Exchange Network Query and Solicit Services v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.
4	Software code for Exchange Network components v1	Delivered to the EPA TFS upon delivery of each software component.
4*	Flow Configuration Document v1	Within 60 business days of award, or as specified by the TOCOR
4	Final ATTAINS Schema v1	Within 60 business days of award, or as specified by the TOCOR
4	Example XML Files v1	Within 60 business days of award, or as specified by the TOCOR
5*	Database requirements and design document	Within 20 business days of receiving technical direction from the TOCOR
5	Entity Relationship Diagram v1	Draft due within 30 business days of acceptance of requirements and design document. Updates due within 10 business days of receiving technical direction from TOCOR.
5	Mapping of data elements (in DET) to corresponding fields in the database v1	Within 30 business days of receiving technical direction from TOCOR
5*	Proposed approach for security model	Within 20 business days of receiving technical direction from TOCOR
5*	Proposed approach for reporting, archiving, and ensuring data integrity to ensure the system can act as the 'system of record'	Within 20 business days of receiving technical direction from TOCOR
5	Final database v1	Draft due within 60 business days of acceptance of Entity Relationship Diagram. Updates due with each iteration of the ATTAINS Cloud Interface. Final due on April 1, 2016.
6*	Product back-log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
6*	Design screens and use cases	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
6	Incremental functional releases of the ATTAINS Cloud Interface	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR.
6	Incremental update of ATTAINS system documentation	Within 10 business days of each iterative release of the ATTAINS Cloud Interface.
6*	Documented process for populating ATTAINS preproduction backend database from production database	Within 30 business days of receiving technical direction from the TOCOR.
6*	Documented process for provisioning user credentials for ATTAINS	Within 30 business days of receiving technical direction from the TOCOR.
6	Final ATTAINS Cloud Interface	April 1, 2016, unless otherwise directed by the TOCOR.
6	Software code for ATTAINS Cloud Interface v1.0	Delivered to the EPA github upon delivery of each software component.
7*	Requirements and design document for ATTAINS public interface and web services	Within 20 business days of receiving technical direction from the TOCOR
7*	Product back-log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.
7*	Proposed approach for ATTAINS public interface	Within 20 business days of TOCOR acceptance of the requirements and design document
8*	Training materials for classroom training and online training	Within 45 business days of receiving technical direction from the TOCOR
8*	Online help for ATTAINS Cloud Interface	Within 30 business days from each iterative release of the ATTAINS Cloud Interface, with the final online help released at the same time as the final ATTAINS Cloud Interface.
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.
8	Support for pilot states	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.
8	Lessons Learned Document describing the lessons learned from the pilot	Within 30 business days from completion of the pilot.
8	Data migration of historical data	Within 60 business days of receiving direction from the TOCOR.
8	Node plug-in for OpenNode2	Within 90 business days of receiving direction from the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
8	Proposed approach for supporting a node plug-in for other Exchange Network Nodes	Within 30 business days of receiving direction from the TOCOR.
8*	Community Forum page within ATTAINS Cloud Interface	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1 and updated within 10 business days of direction from TOCOR.
8*	Frequently Asked Questions as part of the Community Forum	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1 and updated within 10 business days of direction from TOCOR.
8*	Conference trip reports	Within 10 business days of completing the travel.
9	Queries and reports supporting WQ-27 and WQ-28	With each iterative release of the ATTAINS Cloud Interface, and with the final release on April 1, 2016, unless otherwise specified by the TOCOR.
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR.
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the.
9	Queries and reports testing new approaches for SP-10 and SP-11	Within 60 business days of receiving direction from the TOCOR.
9	Proposed approaches for supporting other measures (SP-12, SP-13, WQ-29, WQ-10, and Urban Waters)	Within 30 business days of receiving direction from the TOCOR.
10*	Deployment of CIP and QA tool within contractor environment	Within 30 business days of award
10	Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.
10	Processed and QA'd national layer of waters with TMDLs	Within 20 business days of receiving direction from the TOCOR.
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	Updates to CIP Tool	Within 30 business days of receiving direction from the TOCOR.
10	Updates to the QA Tool	Within 30 business days of receiving direction from the TOCOR.

*These tasks may begin work prior to approval of the QAPP.

OPTION YEAR 1 (June 1, 2016-May 31, 2017):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Project Charter	Updated charter due within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Project Management Plan	Updated plan due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Baseline schedule for the project and any updated schedules	Updated schedule due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Risk and issues registers	Within 15 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Architecture diagram outlining the architecture of the entire ATTAINS system (version 1.1)	Within 20 business days of receiving technical direction from the TOCOR
1*	Process Diagram	Within 20 business days of receiving technical direction from the TOCOR
1*	Use Case Definitions (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR
1*	Lessons Learned	Within 10 business days of receiving technical direction from the TOCOR
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly
1*	Monthly Change Control Board Meetings	Monthly
1*	Weekly status meeting	Weekly
2*	Updated Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of beginning of the option period.
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
2	Notification that changes are warranted related to QA	Within one business day of occurrence
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR
3	Kick-off meeting for Task Order	Within 10 business days of beginning of the option period or as otherwise directed by the TOCOR.
4*	Exchange Network node workflow requirements and design document v1.1	Within 20 business days of receiving technical direction from the TOCOR
4	Business Rule Engine v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Rules Registry v1.1	Initial rules registry due within 20 business days of acceptance of the development approach and an updated rules registry is due within 15 business days following the release of an iteration.
4	ATTAINS Node v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Parse and Load Module v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
4	Staging Tables Database v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Exchange Network Query and Solicit Services v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Software code for Exchange Network components v1.1	Delivered to the EPA TFS upon delivery of each software component.
4*	Flow Configuration Document v1.1	Draft updates delivered with each iteration with the final document due December 15, 2016, unless otherwise directed by the TOCOR.
4	Final ATTAINS Schema v1.1	Draft updates delivered with each iteration with the final schema due December 15, 2016, unless otherwise directed by the TOCOR.
4	Example XML Files v1.1	Draft updates delivered with each iteration with the final xml files due December 15, 2016, unless otherwise directed by the TOCOR.
5*	Database requirements and design document	Within 20 business days of receiving technical direction from the TOCOR
5	Entity Relationship Diagram v1.1	Draft due within 30 business days of acceptance of requirements and design document. Updates due within 10 business days of receiving technical direction from TOCOR.
5	Mapping of data elements (in DET) to corresponding fields in the database v1.1	Within 30 business days of receiving technical direction from TOCOR
5	Final database v1.1	Draft due within 60 business days of acceptance of Entity Relationship Diagram. Updates due with each iteration of the ATTAINS Cloud Interface. Final due on April 1, 2017.
6*	Product back-log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.
6*	Design screens and use cases	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
6	Incremental functional releases of the ATTAINS Cloud Interface v1.1	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR.
6	Incremental update of ATTAINS system documentation	Within 10 business days of each iterative release of the ATTAINS Cloud Interface.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
6	Final ATTAINS Cloud Interface v1.1	April 1, 2017, unless otherwise directed by the TOCOR.
6	Software code for ATTAINS Cloud System v1.1	Delivered to the EPA github upon delivery of each software component.
7*	Product back-log	Updated product back-log due within 30 business days of receiving direction from TOCOR.
7*	Design screens and use cases for each use case (NARS, state surveys, site specific data, measures, and Geoplatform) with approaches for integrating across the use cases.	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
7	Public web pages for NARS summaries	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2016, unless otherwise directed by the TOCOR.
7	Public web pages for state statistical surveys	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2016, unless otherwise directed by the TOCOR.
7	Public web pages for site specific 305(b)/303(d)/TMDL, etc.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2016, unless otherwise directed by the TOCOR.
7	Web pages for measures reporting	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2016, unless otherwise directed by the TOCOR.
7	Geospatial data published to EPA's Geoplatform via web services	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2016, unless otherwise directed by the TOCOR.
7	Software code for ATTAINS Public Interface	Delivered to the EPA github upon delivery of each software component.
8*	Updated Training materials for classroom training and online training	Within 45 business days of receiving technical direction from the TOCOR

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
8*	Updated Online help for ATTAINS Cloud Interface v1.1	Within 30 business days from each iterative release of the ATTAINS Cloud Interface v1.1, with the final online help released at the same time as the final ATTAINS Cloud Interface v1.1.
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.
8	Support for early adopter states	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR.
8	Updated Node plug-in for OpenNode2 to support ATTAINS v1.1	Within 90 business days of receiving direction from the TOCOR.
8*	Updated Community Forum page within ATTAINS Cloud Interface	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1.1 and updated within 10 business days of direction from TOCOR.
8*	Updated Frequently Asked Questions as part of the Community Forum	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1.1 and updated within 10 business days of direction from TOCOR.
8*	Conference trip reports	Within 10 business days of completing the travel.
9	Queries and reports supporting WQ-27 and WQ-28	With each iterative release of the ATTAINS Cloud Interface v1.1, with the final release on April 1, 2017, unless otherwise specified by the TOCOR.
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.
9	Queries and reports implementing new approaches for SP-10 and SP-11	Within 60 business days of receiving direction from the TOCOR.
9	Queries and reports for supporting other measures (SP-12, SP-13, WQ-29, WQ-10, and Urban Waters); measures to be supported with be directed by the TOCOR.	Within 30 business days of receiving direction from the TOCOR.
10	Updates to Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	Updates to CIP Tool	Within 30 business days of receiving direction from the TOCOR.
10	Updates to the QA Tool	Within 30 business days of receiving direction from the TOCOR.

*These tasks may begin work prior to approval of the QAPP.

OPTION YEAR 2 (June 1, 2017-March 27, 2018):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Project Charter	Updated charter due within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Project Management Plan	Updated plan due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Baseline schedule for the project and any updated schedules	Updated schedule due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Risk and issues registers	Within 15 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Use Case Definitions (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR
1*	Lessons Learned	Within 10 business days of receiving technical direction from the TOCOR
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly
1*	Monthly Change Control Board Meetings	Monthly
1*	Weekly status meeting	Weekly

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
2*	Updated Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of beginning of the option period.
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR
2	Notification that changes are warranted related to QA	Within one business day of occurrence
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR
3	Kick-off meeting for Task Order	Within 10 business days of beginning of the option period or as otherwise directed by the TOCOR.
4	Maintenance of Exchange Network Components, including maintaining code in EPA TFS.	Any updates to the Exchange Network components will be deployed within 30 business days of receiving technical direction from the TOCOR
5	Maintenance of ATTAINS database Components, including maintaining code in EPA TFS.	Any updates to the ATTAINS database components will be deployed within 30 business days of receiving technical direction from the TOCOR
6	Maintenance of ATTAINS Cloud Interface, including maintaining code in EPA TFS.	Any updates to the ATTAINS Cloud Interface components will be deployed within 30 business days of receiving technical direction from the TOCOR
7*	Product back-log	Updated product back-log due within 30 business days of receiving direction from TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
7*	Design screens and use cases for each use case (to conform with ATTAINS version 1.1, to support an API, and to support a queryable public interface) with approaches for integrating across the use cases.	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
7	Updated public web interface to accommodate changes from ATTAINS version 1.1	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.
7	Public Application Program Interface (API) and web services supporting programmatic retrieval of ATTAINS data.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.
7	Queryable interface for downloading ATTAINS data.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.
7	Software code for ATTAINS Public Interface	Delivered to the EPA TFS upon delivery of each software component.
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.
8	Support for remaining states	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the.
8	Maintain Node plug-in for OpenNode2 to support ATTAINS v1.1	Any updates to the Node Plug-In will be deployed within 30 business days of receiving technical direction from the TOCOR.
8*	Maintain Community Forum page within ATTAINS Cloud Interface	Any updates to the Forum will be deployed within 30 business days of receiving technical direction from the TOCOR
8*	Maintain Frequently Asked Questions as part of the Community Forum	Any updates to the FAQs will be deployed within 30 business days of receiving technical direction from the TOCOR
8*	Conference trip reports	Within 10 business days of completing the travel.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
9	Maintain measures queries and reports.	Any updates to the measures queries and reports will be deployed within 30 business days of receiving technical direction from the TOCOR.
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the.
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR.
10	Updates to Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	Updates to CIP Tool	Within 30 business days of receiving direction from the TOCOR.
10	Updates to the QA Tool	Within 30 business days of receiving direction from the TOCOR.

*These tasks may begin work prior to approval of the QAPP.

D. REPORTING

All documentation and reporting under this Task Order shall be in compliance with contract requirements. See contract clause F.2, F.3, and J.2 "List of Attachments, Number 2 - Reports of Work".

The contractor shall prepare and furnish each month to the TOCOR a written summary of work performed, and progress towards the schedule of benchmarks, deliverables, and milestones which has been accomplished each month. The contractor shall also include in this item a brief written summary of any challenges encountered in the appropriate month.

In addition, the contractor shall identify and briefly describe in the written monthly report those QA / QC activities which were performed to support implementation of this task order, and furnish a brief written description of: problems encountered, and any deviations were occurred from: the QMP, any existing QAPP, any SOP's, checklists, or other QA guidance, as well as a description of the corrective actions taken.

E. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as Contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

F. TRAVEL

All performance, documentation and reporting of Contractor Travel under this Task Order shall be in compliance with contract requirements. Reference Contract Clause H-18.

G. VALIDATION OF TASK ORDER DELIVERABLES FOR SECTION 508 COMPLIANCE

The Contractor shall support the TOCOR in conducting a “Final Deliverable Validation” to ensure compliance with Section 508 and the Federal Acquisition Regulations (FAR) related to “ electronic and information technology (EIT) deliverables”. The Contractor shall furnish certification, in writing, to the TOCOR that the Contractor has complied with EPAAR Clause 1552.211-79 “Compliance with EPA Policies for Information Resources Management” (Reference Contract Clause C-1), including the requirement that all electronic and information technology (EIT) deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/> . Reference Contract Clause C-1 (c).

H. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS

No single event over \$20,000 is anticipated in connection with this Task Order. The contractor shall immediately notify the EPA Contracting Officer, Contract Level COR, and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar, or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

I. QUALITY ASSURANCE SURVEILLANCE PLAN

Per contract requirements.

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES 1 4	
2. AMENDMENT/MODIFICATION NO. 001		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. See Schedule		5. PROJECT NO. (If applicable)	
6. ISSUED BY (FOR U.S. MAIL ONLY) US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		CODE CP0D		7. ADMINISTERED BY (If other than Item 6) CP0D US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		CODE CP0D	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) R T I International Attn: DEBORAH ELLISON PO BOX 12194 (b)(4) RESEARCH TRIANGLE PARK NC 277092194				(x)			
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-12-054 0010			
CODE (b)(4)				FACILITY CODE			
				10B. DATED (SEE ITEM 13) 07/23/2015			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule				Net Increase: \$260,860.00			
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE		A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
		B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).					
		C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X		D. OTHER (Specify type of modification and authority) FAR 52.232-22-Limitation of Funds					
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) DUNS Number: (b)(4) TECHNICAL SUPPORT FOR ASSESSMENT TMDL TRACKING AND IMPLEMENTATION SYSTEM (ATTAINS) UNDER THE WATER QUALITY FRAMEWORK The purpose of this modification is to incrementally fund the Base Period. TOCOR: Dwane Young Max Expire Date: 03/27/2018 LIST OF CHANGES: Reason for Modification : Funding Only Action Obligated Amount for this Modification: \$260,860.00 Continued ... Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Noelle Mills			
15B. CONTRACTOR/OFFEROR (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA ELECTRONIC SIGNATURE (Signature of Contracting Officer)		16C. DATE SIGNED 08/06/2015	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-12-054/0010/001	2	4

NAME OF OFFEROR OR CONTRACTOR

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ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Obligated Amount for this modification: \$260,860.00</p> <p>Incremental Funded Amount changed from \$901,552.84 to \$1,162,412.84</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 14-15-B-87FM-202BD4XPQ-2505-1587ME5033-001</p> <p>Beginning FiscalYear 14</p> <p>Ending Fiscal Year 15</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 87FM</p> <p>Program (PRC) 202BD4XPQ</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project) LFTD0000</p> <p>Cost Organization</p> <p>DCN-LineID 1587ME5033-001</p> <p>Quantity: 0</p> <p>Amount: \$225,860.00</p> <p>Percent: 17.13839</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p style="padding-left: 40px;">RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p>www2.epa.gov/financial/contracts</p> <p>Durham NC 27711</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 15-16-B-30HNP-202BD4XUW-2505-1530EAS035-001</p> <p>Beginning FiscalYear 15</p> <p>Ending Fiscal Year 16</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 30HNP</p> <p>Program (PRC) 202BD4XUW</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 1530EAS035-001</p> <p>Quantity: 0</p> <p>Amount: \$35,000.00</p> <p>Percent: 2.65582</p> <p>Subject To Funding: N</p> <p>Payment Address:</p> <p>Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED

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NAME OF OFFEROR OR CONTRACTOR

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ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Delivery Location Code: OW OW US Environmental Protection Agency 26 West Martin Luther King Drive Cincinnati OH 45268 USA</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>FOB: Destination Period of Performance: 07/24/2015 to 05/31/2016 All other terms and conditions remain unchanged.</p>				

Section B - Supplies or Services/Prices was revised as follows.

1 - Clauses was revised as follows.

Summary of Clause Changes:

Clause, EPA-B-32-101, is incorporated as follows:

BASE PERIOD:

Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractor's performance through 05/24/2016.

(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EPA-B-16-102), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

SEE RECAP

Contract EP-C-12-054 TO 10

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD

Base Period - 07/24/2015 through 05/31/2016

Funding Action	Est. Cost	Fixed Fee	Total CPFF
Initial Award	(b)(4)	(b)(4)	\$ 901,552.84
Modification 1			\$ 260,860.00
Total Funded			\$ 1,162,412.84
Total Per Contract			\$ 1,317,860.00
Balance Unfunded			\$ 155,447.16

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 4	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
002		See Block 16C		PR-OW-15-00672			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
		CPOD				CPOD	
(FOR U.S. MAIL ONLY) US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268				CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268			
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x) 9A. AMENDMENT OF SOLICITATION NO.			
R T I International Attn: DEBORAH ELLISON PO BOX 12194 (b)(4) RESEARCH TRIANGLE PARK NC 277092194							
				9B. DATED (SEE ITEM 11)			
CODE (b)(4)				FACILITY CODE			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-12-054 0010			
				10B. DATED (SEE ITEM 13) 07/23/2015			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase: \$101,587.00			
See Schedule							
13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.232-22-Limitation of Funds						
E. IMPORTANT: Contractor <input checked="" type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: (b)(4)							
TECHNICAL SUPPORT FOR ASSESSMENT TMDL TRACKING AND IMPLEMENTATION SYSTEM (ATTAINS) UNDER THE WATER QUALITY FRAMEWORK							
The purpose of this modification is to incrementally fund the Base Period.							
TOCOR: Dwane Young Max Expire Date: 03/27/2018							
LIST OF CHANGES:							
Reason for Modification : Funding Only Action							
Obligated Amount for this Modification: \$101,587.00							
CHANGES FOR LINE ITEM NUMBER: 1							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Noelle Mills			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Electronic Signature of Contracting Officer)		09/17/2015	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-12-054/0010/002	2	4

NAME OF OFFEROR OR CONTRACTOR

R T I International

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount for this modification: \$101,587.00 Incremental Funded Amount changed from \$1,162,412.84 to \$1,263,999.84</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 15-16-B-87FN-202BD4X22-2505-1587ME5037-005 Beginning FiscalYear 15 Ending Fiscal Year 16 Fund (Appropriation) B Budget Organization 87FN Program (PRC) 202BD4X22 Budget (BOC) 2505 Job # (Site/Project) LFTD0000 Cost Organization DCN-LineID 1587ME5037-005 Quantity: 0 Amount: \$77,900.00 Percent: 5.9111 Subject To Funding: N Payment Address:</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 15-16-B-87FN-202BD4X22-2505-1587ME5037-006 Beginning FiscalYear 15 Ending Fiscal Year 16 Fund (Appropriation) B Budget Organization 87FN Program (PRC) 202BD4X22 Budget (BOC) 2505 Job # (Site/Project) LFTDSC00 Cost Organization DCN-LineID 1587ME5037-006 Quantity: 0 Amount: \$4,100.00 Percent: .31111 Subject To Funding: N Payment Address:</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 15-16-B-87FM-202BD4XPQ-2505-1587ME5037-004 Beginning FiscalYear 15 Ending Fiscal Year 16 Fund (Appropriation) B Budget Organization 87FM Continued ...</p>				

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED
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NAME OF OFFEROR OR CONTRACTOR

R T I International

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Program (PRC) 202BD4XPQ Budget (BOC) 2505 Job # (Site/Project) LFTD0000 Cost Organization DCN-LineID 1587ME5037-004 Quantity: 0 Amount: \$18,607.65 Percent: 1.41196 Subject To Funding: N Payment Address:</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 15-16-B-87FM-202BD4XPQ-2505-1587ME5037-003 Beginning FiscalYear 15 Ending Fiscal Year 16 Fund (Appropriation) B Budget Organization 87FM Program (PRC) 202BD4XPQ Budget (BOC) 2505 Job # (Site/Project) LFTDSC00 Cost Organization DCN-LineID 1587ME5037-003 Quantity: 0 Amount: \$979.35 Percent: .07431 Subject To Funding: N Payment Address:</p> <p>Delivery Location Code: OW OW US Environmental Protection Agency 26 West Martin Luther King Drive Cincinnati OH 45268 USA</p> <p>Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711</p> <p>FOB: Destination Period of Performance: 07/24/2015 to 05/31/2016 All other terms and conditions remain unchanged.</p>				

Section B - Supplies or Services/Prices was revised as follows.

1 - Clauses was revised as follows.

Summary of Clause Changes:

Clause, EPA-B-32-101, is incorporated as follows:

BASE PERIOD:

Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractor's performance through 05/18/2016.

(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EPA-B-16-102), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

RECAPITULATION OF FUNDING TO DATE BY CONTRACT PERIOD

Base Period - 07/24/2015 through 05/31/2016

Funding Action	Est. Cost	Fixed Fee	Total CPFF
Initial Award	(b)(4)	(b)(4)	\$ 901,552.84
Modification 1			\$ 260,860.00
Modification 2			\$ 101,587.00
Total Funded			\$ 1,263,999.84
Total Per Contract			\$ 1,317,860.00
Balance Unfunded			\$ 53,860.16

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT		1. CONTRACT ID CODE		PAGE OF PAGES 1 35	
2. AMENDMENT/MODIFICATION NO. 003		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. PR-CPOD-16-00060	
5. PROJECT NO. (If applicable)		6. ISSUED BY CODE CPOD (FOR U.S. MAIL ONLY) US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		7. ADMINISTERED BY (If other than Item 6) CODE CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) R T I International Attn: DEBORAH ELLISON PO BOX 12194 (b)(4) RESEARCH TRIANGLE PARK NC 277092194		(x)		9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-12-054 0010	
CODE (b)(4)		FACILITY CODE		10B. DATED (SEE ITEM 13) 07/23/2015	

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: IAW 1552.217-71, Option to Extend the Term of the Contract, Cost-Type Contract
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ☐ is not, ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: (b)(4)

TOCOR: Dwane Young Max Expire Date: 03/27/2018

LIST OF CHANGES: Reason for Modification: Exercise an Option

This modification is issued to incorporate the following contractual changes:

- To exercise Option Period 1 with a period of performance of 01-JUN-16 to 31-MAY-17.
- To provide incremental funding in the amount of \$195,000.00 (cost: (b)(4) fee:

(b)(4) by shifting funds from the base period to option period 1.

- To update the following clauses: 1552.211-73, LEVEL OF EFFORT - COST REIMBURSEMENT TERM CONTRACT (APR 1984) DEVIATION (AUG 1985); EPA-B-16-102, ESTIMATED COST AND FIXED FEE; EPA-B-32-101, LIMITATION OF FUNDS NOTICE; and EPA-F-12-101, PERIOD OF PERFORMANCE as shown
- Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print) Donna Cooper, Senior Contracting Officer		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Noelle Mills	
15B. CONTRACTOR/OFFEROR Donna Cooper (Signature of person authorized to sign)	15C. DATE SIGNED 5-26-16	16B. UNITED STATES OF AMERICA, Noelle Mills (Signature of Contracting Officer)	16C. DATE SIGNED 5/27/16

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-12-054/0010/003	2	35

NAME OF OFFEROR OR CONTRACTOR
R T I International

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>on the attached.</p> <p>4. To provide an updated PWS, see attached.</p> <p>5. All other terms and conditions remain unchanged.</p> <p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Obligated Amount for this modification: -\$195,000.00</p> <p>Incremental Funded Amount changed from \$1,263,999.84 to \$1,068,999.84</p> <p>CHANGES FOR ACCOUNTING CODE: 15-16-B-87FM-202BD4XPQ-2505-LFTD0000-1587ME5030-001</p> <p>Amount changed from \$832,000.00 to \$671,703.00 Percent changed from 63.13265 to 50.96922</p> <p>CHANGES FOR ACCOUNTING CODE: 15-16-B-30HNP-202BD4XUW-2505-1530EAS035-001</p> <p>Amount changed from \$35,000.00 to \$297.00 Percent changed from 2.65582 to .02254</p> <p>CHANGES FOR LINE ITEM NUMBER: 2</p> <p>Total Amount changed from \$1,352,567.00 to \$1,975,993.00</p> <p>Obligated Amount for this modification: \$195,000.00</p> <p>Incremental Funded Amount changed from \$0.00 to \$195,000.00</p> <p>Exercised option</p> <p>CHANGES FOR DELIVERY LOCATION: CPOD</p> <p>Amount changed from \$1,352,567.00 to \$1,975,993.00 Delivery Date Added : 05/31/2017</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code: 15-16-B-30HNP-202BD4XUW-2505-1530EAS035-001</p> <p>Beginning FiscalYear 15</p> <p>Ending Fiscal Year 16</p> <p>Fund (Appropriation) B</p> <p>Budget Organization 30HNP</p> <p>Program (PRC) 202BD4XUW</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 1530EAS035-001</p> <p>Quantity: 0</p> <p>Amount: \$34,703.00</p> <p>Percent: 2.56571</p> <p>Continued ...</p>				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-12-054/0010/003	PAGE	OF
		3	35

NAME OF OFFEROR OR CONTRACTOR

R T I International

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Subject To Funding: N Payment Address: NEW ACCOUNTING CODE ADDED: Account code: 15-16-B-87FM-202BD4XPQ-2505-LFTD0000-1587ME5030-001 Beginning FiscalYear 15 Ending Fiscal Year 16 Fund (Appropriation) B Budget Organization 87FM Program (PRC) 202BD4XPQ Budget (BOC) 2505 Job # (Site/Project) LFTD0000 Cost Organization DCN-LineID 1587ME5030-001 Quantity: 0 Amount: \$160,297.00 Percent: 11.85132 Subject To Funding: N Payment Address: Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711 FOB: Destination Period of Performance: 07/24/2015 to 05/31/2017				

Section B - Supplies or Services/Prices was revised as follows.

1 - Clauses was revised as follows.

Summary of Clause Changes:

Clause, 1552.211-73, is incorporated as follows:

Local Clauses 1552.211-73 LEVEL OF EFFORT - COST REIMBURSEMENT TERM CONTRACT (APR 1984) DEVIATION (AUG 1985)

(a) The Contractor shall perform all work and provide all required reports within the level of effort specified below. The Government will order 13,853 direct labor hours for option period 1 which represents the Government's best estimate of the level of effort required to fulfill these requirements.

(b) Direct labor includes personnel such as engineers, scientists, draftsmen, technicians, statisticians, and programmers and not support personnel such as company management, typists, and key punch operators even though such support personnel are normally treated as direct labor by the Contractor. The level of effort specified in paragraph (a) includes Contractor, subcontractor, and consultant labor hours.

(c) Under any circumstances, if the Government orders or the Contractor provides less than 90 percent of the level of effort specified for the base period or any optional period exercised, an equitable downward adjustment of the fixed fee, if any, for that period will be made. The Government may require the Contractor to provide additional effort up to 110 percent of the level of effort for any period until the estimated cost for that period has been reached. However, this additional effort shall not result in any increase in the fixed fee, if any. If this is a cost-plus-incentive-fee (CPIF) contract, the term "fee" in this paragraph means "base fee and incentive fee." If this is a cost-plus-award-fee (CPAF) contract, the term "fee" in this paragraph means "base fee and award fee."

(d) If the level of effort specified to be ordered during a given base or option period is not ordered during that period, that level of effort may not be accumulated and ordered during a subsequent period.

(e) These terms and conditions do not supersede the requirements of either the "Limitation of Cost" or "Limitation of Funds" clauses.

(end of clause)

Clause, EPA-B-16-102, is incorporated as follows:

Local Clauses EPA-B-16-102 ESTIMATED COST AND FIXED FEE

(a) The estimated cost of this contract is (b)(4)

(b) The fixed fee is (b)(4)

(c) The total estimated cost and fixed fee is \$1,975,993.00.

Clause, EPA-B-32-101, is incorporated as follows:

Local Clauses EPA-B-32-101 LIMITATION OF FUNDS NOTICE

(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost for the base period and (b)(4) is allotted to cover estimated cost for Option Period 1.

Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee for the base period and (b)(4) is provided to cover the corresponding increment of fixed fee for Option Period 1. The amount allotted for costs is estimated to cover the contractor's performance through June 20, 2016.

(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EPA-B-16-102), the Limitation of Cost clause shall become applicable.

(c) Recapitulation of Funds

Base Period - 07/24/2015 through 05/31/2016

Funding Action	Est. Cost	Fixed Fee	Total CPFF
Initial Award	(b)(4)	(b)(4)	\$ 901,552.84
Modification 1			\$ 260,860.00
Modification 2			\$ 101,587.00
Modification 13			\$ (195,000.00)
Total Funded			\$ 1,068,999.84
Total Per Contract			\$ 1,317,860.00
Balance Unfunded			\$ 248,860.16

Option Period 1 - 6/01/2016 through 05/31/2017

Funding Action	Est. Cost	Fixed Fee	Total CPFF
Modification 13	(b)(4)	(b)(4)	\$ 195,000.00
Total Funded			\$ 195,000.00
Total Per Contract			\$ 1,975,993.00
Balance Unfunded			\$ 1,780,993.00

Section F - Deliveries or Performance was revised as follows.

1 - Clauses was revised as follows.

Summary of Clause Changes:

Clause, EPA-F-12-101, is incorporated as follows:

Local Clauses EPA-F-12-101 PERIOD OF PERFORMANCE

The period of performance of this contract shall be from 07/24/2015 through 05/31/2017 inclusive of all required reports.

**PERFORMANCE WORK STATEMENT
TSAWP IDIQ MULTIPLE-AWARD CONTRACT
SOLICITATION ID # EP-C-12-054 TO 10 (PR-OW-16-00224)**

**TECHNICAL SUPPORT for ASSESSMENT TMDL TRACKING AND IMPLEMENTATION SYSTEM
(ATTAINS) UNDER THE WATER QUALITY FRAMEWORK**

A. BACKGROUND:

The Office of Water has embarked on a multi-year effort called the Water Quality Framework (WQF) to better integrate existing data systems to support water quality managers and to streamline water quality assessment and reporting to provide a more complete picture of the nation's water quality. Under the WQF, the Assessment TMDL Tracking and Implementation System (ATTAINS) is the first system to undergo improvements, which supports state reporting under Clean Water Act Sections 303(d) and 305(b).

This assistance is in support of EPA's work related to the re-design of the ATTAINS system. The purpose of this effort is to re-design and develop ATTAINS to improve the tracking of state reported information under the Clean Water Act (CWA) Sections 303(d) and 305(b) Integrated Reporting process, which includes:

- Section 303(d) lists of impaired and threatened waters that need a TMDL;
- Section 305(b) assessment and attainment status of waters; and
- State-wide statistical survey assessments of the extent of waters supporting the goals of the Act as reflected in state water quality standards.
- Total Maximum Daily Loads (TMDLs)

In 2014, EPA engaged with States and Regions on several planning activities that focused on:

1. Data Elements and Schema: This workgroup defined the data elements and draft schema for exchanging Integrated Reporting information between the States and EPA.
2. Data Exchange Methodology: This workgroup developed recommendations on data exchange approaches and system design. EPA conducted a separate options analysis of technical options.
3. Performance Measures Evaluation: This workgroup evaluated the existing performance measures that can be reported on with Integrated Reporting data. This workgroup made recommendations on new approaches for how these measures can be reported and how the new ATTAINS system can be used to report on these measures.
4. Improved Assessment Methods: This workgroup evaluated tools and methods that can be used to discover monitoring data and automatically screen that data against water quality criteria.

The final reports are available as attachments to this PWS. These documents will provide information that will be needed for the contractor to conduct the work outlined in this task order.

The ATTAINS data system supports state reporting under CWA Sections 303(d) and 305(b). Beginning with the 2002 Integrated Reporting cycle to date, EPA recommended that states not only submit to EPA hard copy Integrated Report, but also the associated tabular and geospatial data. Due in part to the increased emphasis being placed on electronic reporting, the CWA Sections 303(d) and 305(b) programs have embarked on the ATTAINS redesign to fully transition states to electronic reporting by the 2018 Integrated Reporting cycle.

This transition will occur in two phases. Phase 1 will implement the recommendations from the data elements and schema and data exchange methodology workgroups by April 2016 in order for the new system to be ready for states to be able to test following their submissions for the 2016 Integrated Reporting cycle. Once Phase 1 is fully implemented, EPA will begin to identify if any improvements or modifications need to be made to the

system in order for a complete transition of all 56 states and territories for the 2018 Integrated Reporting cycle.

Over the past few years, some components of ATTAINS have been upgraded to use the APEX software. Table 1 lists the major components of ATTAINS. Despite these improvements, the ATTAINS system does not currently meet the needs of EPA under the Water Quality Framework.

Table 1 – ATTAINS components

ATTAINS Component ¹	Description/Purpose	Planned Status Under the New ATTAINS System
Assessment Database (ADB): http://www.epa.gov/waters/adb/	A distributed database that states may use to track and report their assessment decisions under CWA Sections 303(d) and 305(b). http://www.epa.gov/waters/adb/	Decommission and Replace with ATTAINS Cloud Interface
ADB Compatible Excel Spreadsheet	An Excel spreadsheet used by states that use their own internal database to track assessment decisions.	Decommission
OWIR-ATT Flow	CWA Sections 303(d) and 305(b) Exchange Network Flow	Decommission and Replace with new ATTAINS Exchange Network flow
ATTAINS Web Express: https://ofmext.epa.gov/apex/waters10_shire/f?p=208:2:1072095077752::: <ul style="list-style-type: none"> • Attribute Data Submission Form • GIS Data Submission Form • NTTS Data Entry Tool • State-wide Statistical Survey Web Data Entry Tool 	The ATTAINS Web Express is divided into two sections: Data Submission. This application is intended for States and Regions to use to submit data to EPA.	Decommission and Replace as part of the ATTAINS redesign. This includes the following subcomponents: Attribute and GIS Data Submission Forms NTTS Tool – design should build existing NTTS into ATTAINS system, but slight modifications likely necessary based on workgroup discussions State-wide Statistical Survey Tool – design should build this tool into ATTAINS System

¹ These components relate to the tabular data in ATTAINS. As part of the CWA 303(d) and 305(b) submissions, states also submit geospatial information to identify the location of assessment decisions. EPA recently completed an Integrated Reporting Georeferencing Pilot, which identified catchment-based indexing as the direction that EPA will move to use for analytical purposes. State submitted geospatial information would be used for display purposes.

ATTAINS Component ¹	Description/Purpose	Planned Status Under the New ATTAINS System
ATTAINS Database and Website: http://www.epa.gov/waters/ir	ATTAINS includes state-reported information, required under Clean Water Act (CWA) Sections 303(d) and 305(b), regarding state assessment of the support of designated uses in assessed waters, identified causes and sources of impairment, identified impaired waters including their location, Statewide Statistical Survey information, and Total Maximum Daily Load (TMDL) status.	Update to provide an integrated view of EPA data as described in this PWS.
AskWaters Simple and Expert Query Views for 303(d) and 305(b)	Queries designed for users to download 303(d) and 305(b) information, as well as TMDLs into a an excel spreadsheet for use.	Update as appropriate based on changes to the ATTAINS database structure and integrate with new ATTAINS public web site and ATTAINS Cloud interface.
Web Services	The Office of Water mapping services that provide access to geospatial data stored in the Reach Address Database (RAD).	Update to account for changes to the ATTAINS system.
ATTAINS 303(d) and 305(b) Review Website	A website where states and Regions can review the state submitted 303(d) and 305(b) data prior to releasing the information to the public	Decommission

B. SCOPE

The contractor shall provide support to the EPA Task Order Contracting Officer Representative (TOCOR) under contract level tasks 2.3.1.8, 2.3.1.9, 2.3.5.8, and 2.3.5.9 to plan, manage, design, and, develop the ATTAINS system consistent with the outcomes of the planning activities in the Background section² to meet the needs of EPA and in support of the Integrated Reporting process. The ATTAINS system will be designed and developed in such a way that it can be hosted in an EPA environment. The contractor shall also provide technical support, training support, and outreach for the redesigned ATTAINS system.

Technical Direction may come from the EPA TOCOR or the Alternate TOCOR if the TOCOR is on leave or travel, the PO, or the CO.

C. TASKS

Task 1 – Project Plan/Task Order Management

The contractor shall manage this project in accordance with the Project Management Institute's (PMI) Project Management Body of Knowledge (PMBOK) or PProjects IN Controlled Environments Version 2.0 (PRINCE2). The contractor shall develop artifacts and shall use the Enterprise Project Management Environment (EPM) or a similar PM tool as directed by the TOCOR as the primary project management and reporting tool. EPA has implemented a scheduling environment using Microsoft Project Professional 2010 and Project Server 2010. All

² As part of another EPA contract, the following components are being developed: 1) Exchange Network XML schema, 2) flow configuration document, and 3) ATTAINS table structure.

final versions of project management artifacts, including project charter, project plan, work breakdown structure, schedules, and other artifacts, shall be stored in EPM unless otherwise directed by the TOCOR.

The contractor shall use an Agile software development approach for developing the components of the ATTAINS system. Due to the nature of the Agile software development process, the contractor shall periodically (at least quarterly) review the project status and resolve higher level task “placeholders” into more discrete and detailed tasks, or “sprint plans”. These tasks will correspond to the development sprints and the business requirements and themes appearing in the product backlog (or “Master to do List”). The contractor shall review the sprint plans with the TOCOR, and, upon approval by the TOCOR, update EPM and necessary project artifacts and begin enacting the plan. In addition, the Agile development approach uses tools such as velocity charts, burn down charts, and other artifacts to update stakeholders of software development progress. The project must be managed to produce incremental releases of the new ATTAINS software at least every six (6) months once development begins.

During the course of the project, adjustments may be needed to improve stakeholder interpretation of the information given in these tools. Thus, the contractor may recommend to the TOCOR adjustments to these tools. Upon approval of the recommendations by the TOCOR, the contractor shall begin using the new tools or new versions of the tools to communicate progress.

The project shall provide for regular communication between EPA team members and contractor staff. The contractor shall participate in bi-weekly status meetings, and monthly Change Control Board (CCB) meetings. The contractor shall also use other mediums and material to support regular communication with EPA and other project stakeholders.

For all system development, the contractor shall plan for three separate environments for systems to be deployed in. First, the contractor shall maintain a development environment that is accessible only to EPA, the Design Team, and the contractor, and is used for the development of all software components. The development environment shall be hosted at the contractor facility unless otherwise directed by the TOCOR to use an EPA Cloud-hosted development environment. A pre-production environment will allow for testing by both EPA and the states. The pre-production environment will be hosted by EPA at either the National Computing Center (NCC) or in an EPA approved cloud environment. Finally a production environment will be used by EPA and the states for all production-level data, and will also be hosted by EPA at either the NCC or in an EPA-approved cloud environment. The supporting software frameworks shall be identical across all environments. New frameworks may be tested by the contractor in the development environment, upon approval of the TOCOR and OW’s Information Management Official. Mechanisms shall be established to ensure that data available in the production environment are also available in the pre-production environment to ensure that states have adequate data upon which to perform testing. Security on all platforms shall follow standard federal security practices as outlined by EPA and documented in the EPA General Support System Security Plan. System components shall comply with Section 508 of the Rehabilitation Act.

For all deployments at EPA, the contractor shall check in all code to the Office of Water’s Team Foundation Server (TFS) or other EPA approved code repository environment (as directed by the TOCOR) and link all code packages to appropriate test cases which are also to be stored in TFS. The contractor shall also follow the Application Deployment Checklist (ADC) process and provide materials necessary deploying applications at EPA.

No changes to this task.

Task 2 – Quality Assurance/ Quality Control

The contractor shall adhere to the Contract-level Quality Management Plan (QMP) in performing the scope of requested services in this task order

In addition to adhering to the QMP, EPA has determined a Quality Assurance Project Plan (QAPP) will be required for this task order. The QAPP shall contain references to the appropriate sections of the contract level QMP, as well as include relevant Standard Operating Procedures (SOPs), checklists, or other QA guidance, that will be followed to complete this task order.

Additional QA Documentation Required

All major deliverables (e.g., Technical Support Documents, Study Reports, Study Plans, etc.) produced by the contractor under this Task Order shall include a discussion of the QA/QC activities that were or will be performed to support the deliverable.

The contractor shall immediately notify the EPA TOCOR in writing of any QA problems encountered that may impact the performance of this Task Order, with recommendations for corrective action.

The contractor also shall provide EPA with monthly written reports of QA-related activities performed during implementation of this Task Order (see Section D “Reporting” below). These monthly written QA reports shall identify QA activities performed to support implementation of this task order, problems encountered, deviations from the QMP, SOPs, checklists, or other QA guidance, and corrective actions taken. The contractor may include this as a part of the required monthly financial/technical progress report required by the contract (see Section D “Reporting” below).

This project is an IT system development project, and as such has unique QA requirements. The PWS requires the following QA Reports that will be reviewed by EPA as a mechanism to ensure that the product being delivered meets the requirements specified by EPA:

- a) The contractor shall deliver reports outlining the outcomes of testing as part of the Test Plans supporting system development activities described under Tasks 4, 5, 6, and 7
- b) The contractor shall provide the outputs from Integration Testing, ensuring that components all work with one another
- c) The contractor shall provide a running list of issues and potential enhancement requests
- d) The contractor shall provide a written report of any logic and code reviews; and upon TOCOR request, provide the code for EPA review

In addition to this, EPA will conduct periodic code reviews to ensure that the logic being implemented by the contractor meets the requirements of EPA.

The QAPP shall also contain SOPs and QA procedures for any data migration conducted under Task 8 as well as catchment-based data processing conducted under Task 10.

Only tasks 1 and 3 can begin prior to approval of the QAPP. In addition, deliverables that can be initiated prior to an approved QAPP are indicated with a “*” in the list of deliverables. Everything else requires a QAPP that has been approved and signed by EPA QA staff before work can be initiated.

No changes for this task

Task 3 – “Kick Off” meeting

Prior to beginning work on ~~this task order~~ Option Period 1, the TOCOR shall schedule a kick-off meeting with the contractor to discuss the tasks within this task order, the goals of this task order, and to review the schedule of benchmarks, deliverables, and milestones for Option Period 1. The contractor should plan for one full-day trip for four people to Washington, DC for this kick-off meeting.

Summary of changes:

- Specified this kick-off meeting will be for Option Period 1

Task 4 – ATTAINS Exchange Network Components

The Exchange Network provides a means for states to submit data directly from their databases to EPA via a pre-defined and agreed upon format. The Exchange Network also provides methods for states to retrieve data from EPA data systems to keep their databases in sync with EPA systems. This is all accomplished through agreed-upon web services and XML schema (more information on the Exchange Network is available at: <http://www.exchangenetwork.net>). The ATTAINS system will provide the ability for states to both submit data to EPA and retrieve data from EPA via the Exchange Network. These methods would be available for states that have their own data systems for tracking 303(d)/305(b)/TMDL data, and who are not using the ATTAINS Cloud system. A preliminary version of the schema was completed during the base period. Following a test phase under Option Period 1, the contractor shall finalize the ATTAINS schema, as well as update all of the software components needed to allow the ATTAINS data flow to function.

The following components shall be updated to enable the ATTAINS Exchange Network flow:

1. Business Rule Engine: The contractor shall use a common business layer that will enforce the business rules in the same manner for the both the Exchange Network submitters and the cloud interface users.
2. Rules Registry: The contractor shall maintain a list of business rules that are applied by the ATTAINS system.
3. ATTAINS Node for interacting with EPA’s Central Data Exchange (CDX) node: This node functions as EPA’s internal node that can interact with CDX. It shall be built on top of existing node software and utilize the Next Generation Node (NGN) as its base unless otherwise directed by the TOCOR.
4. Data parsing and loading module: This module shall be able to parse the incoming XML files and load that data into staging tables where the business rules engine can validate the data.
5. Exchange Network Query and Solicit Services: These services will provide the ability for states to extract data from the ATTAINS system. They will provide access to all of the data types identified in the ATTAINS schema and will produce results that match the ATTAINS schema. Companion REST services will also be developed that shall mimic the Query services, except they will only provide publicly accessible data.

For the components identified above (with the exception of the rules registry), the contractor shall maintain a list of prioritized requirements, and shall identify which requirements are addressed in each iterative release. Each iteration will be considered a ‘beta’ release with the final iteration being version 1.0.

In option period 1, after a brief learning period from version 1.0, the contractor shall plan for an additional 3 iterations of development, resulting in a final release of the ATTAINS system as version 1.1. In option period 2, the contractor shall perform operations and maintenance on the Exchange Network components of ATTAINS as directed by the TOCOR

The contractor shall also compile the final packages of the schema and supporting documents, including the final Flow Configuration Document for review by the EN Network Technology Board (NTB). The contractor shall finalize the Flow Configuration Document, perform validation checks on the ATTAINS schema, and develop example XML files for posting to the Exchange Network site: <http://www.exchangenetwork.net/data-exchange/assessment-tmdl-tracking-and-implementation-system/>.

The XML schema and flow configuration document developed under the base period will comprise version 1.0 of the ATTAINS data flow. In option period 1, the contractor shall plan to update all of these files as directed by the TOCOR, and shall plan to finalize these files and documents as part of version 1.1 of the ATTAINS data flow. EPA does not envision any additional changes to the ATTAINS data flow for option period 2.

Summary of Changes to this Task:

- Reworded to focus on Option Period 1
- Changed the Business Rules Engine to reflect current approaches for this component
- Removed the staging tables since those will no longer be required
- Clarified language to support REST services
- Removed statement on Agile development since Agile is being used for the entire project, so the paragraph on Agile is no longer necessary.

Task 5 – ATTAINS Database

The contractor shall develop a database for storing data from 303(d), 305(b), TMDLs, state statistical survey conclusions, National Aquatic Resource Survey conclusions, TMDL Alternatives, Protection Plans, Priorities, strategic measures, and other information related to Integrated Report. The database shall be designed such that it can serve as the system of record for final 303(d) lists, approved TMDLs, and strategic measures. It shall also be designed such that it can automatically calculate the strategic measures based on the underlying data in the database (see attached Workgroup 3 report for a discussion on the measures related to ATTAINS). EPA envisions that many states will use the ATTAINS system as their system for tracking all of this information, and EPA Regions will use the ATTAINS system for reviewing and approving 303(d) lists and TMDLs. The database shall be designed such that states can work on draft data in a secure environment where only the state staff can view the data. The database shall also be able to support historical ATTAINS data as well as all of the data as defined by the new ATTAINS schema (defined in Task 4).

To ensure understanding of the new ATTAINS data model, the contractor shall maintain an Entity Relationship Diagram of all the proposed ATTAINS data tables with their corresponding fields and relationships. The contractor shall also demonstrate how all of the data elements in the schema map to the corresponding data elements in the database.

The database shall continue to be designed so that it can serve as the ‘system of record’ for 303(d) listing decisions, TMDLs, and performance measures. One major consideration is that once data are officially approved by EPA, they cannot change, and that approved dataset becomes an official record that must be reproducible.

Finally, the contractor shall update the ATTAINS database as directed by the TOCOR. The database shall be developed such that it can be deployed at the National Computing Center (NCC) or in an EPA approved cloud environment. The database is currently designed for the Oracle Enterprise platform, and shall be maintained and updated in this platform.

Version 1.1 of the database shall be delivered in option period 1. The database shall be updated in coordination with the iterative releases of the ATTAINS Cloud Interface. During option period 2, the contractor shall perform operations and maintenance on the database.

Summary of Changes to this Task:

- Reworded language to focus on Option Period 1
- Removed language for developing a proposed security approach since it is complete
- Removed language for considering PostGreSQL as a development option

Task 6 – ATTAINS Cloud Interface

The contractor shall use a use a modified version of the SCRUM Agile development approach to incrementally and iteratively develop, test, document, and deploy the new ATTAINS Cloud Interface into a development and preproduction environment. During the base period, the April 2016 release will be considered version 1.0 of the ATTAINS system. During Option Period 1, version 1.1 will follow an iterative development approach with three iterations deployed to NCC; and the first iteration deployed by December 2016 and the final deployment by April 2017. The contractor shall perform operations and maintenance on the system in option period 2.

EPA has initiated a Design Team that consists of state and Regional staff to provide insight and input to the design of the system. The Design Team will act as a resource to provide input and use cases to the contractor on the design and functionality of the system, especially during Sprints.

The E-Enterprise Portal and the Central Data Exchange Identity Services shall be re-used to meet this requirement, and the contractor shall evaluate their feasibility to meet the needs of the system. The contractor shall use EPA shared services where available and per the direction of the TOCOR. This may include the Geoplatform, EPA Identity Services, and any other shared service as directed by the TOCOR.

Summary of Changes to this Task:

- Reworded language to focus on Option Period 1
- Removed language on IOC and FOC, and focused the language on a more iterative Agile approach with three deployments to NCC during Option Period 1
- Removed language for developing a proposed approach for user provisioning and authentication since that was completed during the base period.

Task 7 – ATTAINS Public Web Site

One of the goals of the ATTAINS system is to provide public access to Integrated Reporting and TMDL data that are provided by the states and Regions. The current ATTAINS public web site made some great strides in better displaying the data and making the data available for download (see <https://www.epa.gov/waterdata/assessment-and-total-maximum-daily-load-tracking-and-implementation-system-attains> and <https://www.epa.gov/waterdata/ask-waters>). As part of the Water Quality Framework, the ATTAINS public website will be integrated more directly with other relevant EPA data sets (i.e. STORET/WQX, NHDPlus, and the National Aquatic Resource Surveys (NARS); see the attached Water Quality Framework factsheet for more information). The ATTAINS public website will also be updated to reflect the changes that will result from the redesign of the ATTAINS system. The new ATTAINS public site will also provide an interactive interface for the NARS data (see the fact sheet:

http://water.epa.gov/type/rsl/monitoring/riverssurvey/upload/NRSA200809_FactSheet_Report_508Compliant_130314.pdf as an example of the type of information that would be available on this site). This interface shall be interactive, and allow a user to explore the findings of the surveys. The vision for the new ATTAINS site is that it would provide a common interface that allows the public to navigate the National Survey data, then explore the state-scale survey data, and then explore the site specific data that is coming from the Integrated Reports. The contractor shall develop the new website to follow EPA's web guide available at: <http://www2.epa.gov/webguide>.

Using a SCRUM Agile development approach, the contractor shall work with the TOCOR to compile a list of requirements for the public ATTAINS site. These requirements will be entered into a product backlog, which will then be prioritized by the TOCOR. This backlog will be used to guide the development of the site. During the base period, the contractor shall compile the list of requirements and provide a proposed approach for TOCOR review and approval. During option period 1, the contractor shall implement the new ATTAINS public web site. The site will be hosted at EPA, and shall be designed so that it is compatible with EPA's web content management system (Drupal).

The new public web site will provide interactive reports as well as data download capability, similar to that of the existing AskWaters application. The new website will also provide an application program interface (API) that will provide access to the ATTAINS data via web services. These web services shall be designed in option period 1, and shall be developed in option period 2. The contractor shall plan for four iterative releases in both option period 1 and option period 2.

Summary of Changes to this Task:

- Fixed/Updated links

Task 8 – State Transition Support and Training

The contractor shall provide training and transition support to the states. The goal of this support is to provide assistance to the states so that all 56 states and territories³ are transitioned to the new ATTAINS system by April 2018. Some states will make the transition on their own with only minimal training support. Other states may need more direct support. As states adopt the ATTAINS system, training will also need to be provided to support those states in using the new system. In support of this task the contractor shall plan on the following 2-day trips for 2 people as follows:

³ The 56 states and territories include all 50 states, the District of Columbia, U.S. Virgin Islands, Puerto Rico, the Commonwealth of the Northern Mariana Islands, and American Samoa.

Option Period 1:

- Little Rock, AR
- Atlanta, GA
- Chelmsford, MA
- Seattle, WA

Option Period 2:

- Dallas, TX
- Philadelphia, PA
- San Francisco, CA
- Kansas City, KS

Subtask 8.1 – Training

The contractor shall develop training materials for the ATTAINS Cloud interface. These materials will include a user guide, and also materials that would support classroom training. The contractor shall evaluate and make recommendations for both a classroom training and an online training. The contractor shall draft online help accessible via the ATTAINS Cloud interface. The online help and training materials shall be available within 30 business days following the release of ATTAINS version 1.0, with the materials being subsequently updated for ATTAINS version 1.1. The contractor shall also conduct trainings as directed by the TOCOR. Training could occur for any of the trips identified above. In addition to these trips, the contractor shall plan for 2 online training classes during the base period and 5 online training courses during each of the two option periods. For all of the webinars, EPA will provide access to the webinar software (Adobe Connect) and the call-in number that participants can use.

Upon completion of the training, the contractor shall distribute a questionnaire to the attendees to gauge the effectiveness of the training. The questionnaire may be in paper form or (preferably) using a web-based survey tool. Results of the questionnaire will be provided to the TOCOR.

The contractor shall develop the course feedback survey and submit the survey to the TOCOR for approval. The contractor shall continue to use the survey, unless modifications are directed by the TOCOR, for any future training.

Subtask 8.2 – Transition Support

Due to the complexity of transitioning 56 states and territories to the new ATTAINS system, EPA desires to begin transition planning as early as possible. It is EPA's intention to consider the states in groups, with the intention to fully transition all states by April 2018.

Upon direction from the TOCOR, the contractor shall develop a strategy and a plan for moving states to the new ATTAINS system. The plan may involve developing and delivering training specific to the states' to ease the transition to the new ATTAINS system and meeting with state personnel to determine transition requirements. The plan will include a schedule and estimated contractor support costs for providing transition support services. Meetings with states should be by conference call or web meeting, but may also occur as part of the planned travel under Task 8 above as directed by the TOCOR.

Upon plan approval and direction from the TOCOR, the contractor shall execute the plan and work with the appropriate contacts as identified in the plan.

The first group of states will consist of those states that have volunteered to pilot the new ATTAINS system in 2016. EPA expects 6-8 states to participate in the pilot. These states will likely also be Design Team members. There are several areas of technical support needed by states during the pilot. The contractor shall provide technical support to the states participating in the pilot. This support includes answering questions related to ATTAINS capabilities, interfacing applications used by the states, data migration, or software configuration settings for ATTAINS, as well as other questions relating to the technical implementation of ATTAINS. Support for the pilot states will be completed during the base period.

For interfacing applications, the contractor shall explain to participants in the pilot how the data exchanges work, what data exchanges are planned and those available for use. The contractor shall not modify any state interfacing applications, but by participating in system demos, webinars, and conference calls, the contractor shall provide guidance on how an interfacing application can consume the data provided through an ATTAINS data exchange.

The contractor shall prepare and deliver a Lessons Learned report to the TOCOR. This report will help guide the design/development of ATTAINS version 1.1.

Following completion of the pilot, the second group of states will consist of early adopters. An estimated 5 to 10 states will serve as the ATTAINS early adopters. Unlike the Pilot where the states test aspects of transitioning to the ATTAINS system without actually moving to the new system, early adopters will complete the move to the ATTAINS system. These early adopters require contractor technical support to assist and troubleshoot a complete transition to the ATTAINS system. As part of the task and at the direction of the TOCOR, the contractor shall, working with each early adopter, develop a transition plan that includes, at a minimum, a transition schedule and an assessment of the state's technical readiness to perform the transition. The contractor shall identify any necessary modifications to the state's interfacing applications to allow data exchange with the new ATTAINS system. Support for the early adopters will be completed during option period 1.

In addition to these early adopters, during option period 1, the contractor shall accelerate transition support by providing support for an additional 10 states or territories. The purpose for this acceleration is to ensure a complete transition by all 50 states by 2018, and to get additional feedback on the ATTAINS system. This assistance may include support for 1 tribe as directed by the TOCOR, and this tribal support would count as one of the 10 states. The contractor shall leverage already planned travel identified above or make use of webinars/telephone conference calls to facilitate this transition support.

The third group of states will consist of the remaining states that have not yet transitioned to the new ATTAINS. The contractor shall develop a list of remaining states along with a prioritization schedule for transitioning those states to the new ATTAINS. Support for the third group will be completed during option period 2.

In addition to the work identified above, the contractor, upon direction by the TOCOR, shall develop tools to assist states in moving to the ATTAINS system. These tools could consist of spreadsheets, PL/SQL scripts, programming code, or other tools designed specifically to facilitate migrating data to ATTAINS. The contractor may also be directed to provide technical support in assisting states in using the tools or migrating data to the ATTAINS system. It is expected that this support will be provided at a minimum to pilot participants as described above.

The contractor shall also migrate existing ATTAINS data to the new ATTAINS data model. The contractor shall evaluate the existing data and identify any needed corrections for the data to meet the data validation requirements of the new system. Any corrections that cannot be made will be identified and noted in the system. This evaluation and migration shall include all of the data from NTTS as well as the Integrated Reporting data in the current ATTAINS system. The contractor shall also enter the existing NARS summary information from the prior national surveys. The information that would be entered would be the information that is currently available

on the survey fact sheets (these fact sheets can be found at http://water.epa.gov/type/watersheds/monitoring/aquaticsurvey_index.cfm).

The contractor shall also create and maintain a community forum page where states can ask questions related to the new ATTAINS system. The contractor shall create and maintain a Frequently Asked Questions page that will be accessible by transitioning states. This community forum shall be deployed as part of the new ATTAINS system. The community forum shall be available at the same location as the ATTAINS Cloud Interface, and available through the same user authentication as the Cloud Interface.

Subtask 8.3 Conference Attendance and Participation

When necessary, the TOCOR will authorize travel for the contractor to attend out of town meetings (such as the Exchange Network Meeting). The contractor shall submit a trip report describing its participation in conference activities. For planning purposes, the contractor shall plan for the following trips:

Option Period 1:

- Chicago, IL (1 person for 3 days) – meeting to be determined by the TOCOR

Option Period 2:

- Philadelphia, PA (1 person for 3 days) – Exchange Network Meeting
- Salt Lake City, UT (1 person for 5 days) – National Water Quality Monitoring Conference (location not yet determined, but use Salt Lake City for cost estimation purposes)

Summary of Changes to this Task:

- Descoped user guides and training materials from the base period, and moved them to Option Period 1
- Descoped Chicago, IL and Denver, CO trips as part of the training (however, not the trip as part subtask 8.3
- Removed from the PWS all of the trips that were completed as part of the Base Period

Task 9 – Support for Performance Measures Reporting

EPA has released a new 303(d) program vision (see <https://www.epa.gov/tmdl/new-vision-cwa-303d-program-updated-framework-implementing-cwa-303d-program-responsibilities>). As part of this new vision, EPA has developed new performance measures that will rely upon the data contained in the ATTAINS system. Because these measures are new, EPA will be working on approaches for communicating these measures to the states and the public. States also will need assistance implementing these new measures, and ensuring that they have sufficient data to support the calculation of these measures. In addition to these new 303(d) program measures, EPA is evaluating new approaches for measuring progress on a number of other water quality measures. EPA has developed draft concepts for these new measures (see attached Workgroup 3 report), and is planning on following a similar approach as to what is being used for the 303(d) program measures.

The contractor shall support EPA in evaluating state data and developing automated procedures for calculating the measures associated with the ATTAINS data. This would include support for existing measures related to the 303(d) program (WQ-27 and WQ-28), piloting new approaches for water quality measures (new measures for SP-10 and SP-11), providing data stores for existing measures based on national and state statistical surveys (SP-13 and WQ-29), as well as evaluate opportunities for integrating other measures within ATTAINS (which may

include, upon direction from the TOCOR, SP-12, WQ-10, and relevant Urban Waters measures). More information on these measures can be found at: http://water.epa.gov/resource_performance/planning/FY-2015-NWPG-Measure-Definitions-Water-Quality.cfm.

EPA plans for the ATTAINS system to be the system of record for these water quality measures, and the contractor shall develop approaches that allows for these measures to not only be stored within the ATTAINS system, but also be discoverable via the ATTAINS public web interface. These measures shall be calculated automatically based on the data entered in the ATTAINS system, and states and Regions shall have the ability to verify and visualize the output.

The contractor shall also provide support to the states as directed by the TOCOR to develop the data necessary to report on these measures. This support could include the development of priority areas (in support of WQ-27), developing GIS layers for states that don't have GIS capability, and providing scenario builder tools to allow states to develop targets and commitments for each of these measures. In option periods 1 and 2, the contractor shall plan to provide support to 10 states in developing their priorities and shall also provide support for 4 states to develop geospatial data for each option period.

Summary of Changes to this Task:

- Updated links
- Updated language to reflect the Option Period

Task 10 – Support Catchment Based Indexing

Geospatial data is of critical importance to EPA in understanding the data in the ATTAINS system. Historically, EPA has processed state geospatial data to the 1:100,000 scale NHDPlus stream network. This has been a fairly time-consuming process. In 2015 EPA will complete development for a new tool that will automate the mapping of state geospatial data to the NHDPlus catchments. This Catchment Indexing Process (CIP) Tool provides a much more streamlined approach for indexing state data to the NHDPlus, and also provides a common framework upon which EPA can calculate the measures discussed above. EPA is also developing a QA tool that will allow for QA/QC of output for the CIP tool prior to the finalization of the data. In initial testing, EPA is already seeing significant improvements in processing time for the processing of state data.

The CIP tool is developed using PostGreSQL with PostGIS and a Python interface. Contractors shall host the PostGreSQL database as well store the NHDPlus v2 in the database. The QA tool is being designed as a web based tool running against the PostGIS server with a Django web services tier (<http://www.django-rest-framework.org/>) and a leaflet web interface (<http://leafletjs.com/>). The QA tool would also be hosted by the contractor. Upon direction from the TOCOR, once an EPA cloud environment is available, these tools will be migrated to the cloud environment, and the contractor will interact with these tools in the cloud environment.

Under this task order, the contractor shall provide operations and maintenance support for this tool. This shall include hosting the tool in the contractor environment, processing state data, performing QA on that data, packaging up data for delivery to the Reach Address Database (RAD), and performing minor corrections or changes to the CIP and QA tools. The contractor shall also process historical state data through the CIP to provide a baseline for measures reporting.

The contractor shall develop Standard Operating Procedures (SOPs) for verifying, processing, and performing QA on state data both before and after processing. These SOPs shall be referenced in the QAPP and kept current to

reflect best practices as the contractor learns from processing the data.

For planning purposes, for option period 1, the contractor shall plan to process and QA any 2016 Integrated Reporting data for an additional 56 state data sets. For option period 2, the contractor shall plan to process 20 state data sets. All final data shall be delivered to the RAD in a format that will be specified by the RAD team. The contractor shall deliver the catchment-based events as well as the original state GIS data in a standard format that will be defined by the RAD team and approved by the TOCOR.

Summary of Changes to this Task:

- Updated language to reflect the Option Period

C. SCHEDULE OF BENCHMARKS, DELIVERABLES & MILESTONES:

BASE YEAR (Tentatively June 1, 2015-May 31, 2016):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
1*	Project Charter	Within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR	Complete
1*	Project Management Plan	Within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR	Complete
1*	Baseline schedule for the project and any updated schedules	Baseline schedule within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR	Complete
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR	Complete
1*	Risk and issues registers	Within 20 business days of award and updated schedules within 5 business days of receiving direction from TOCOR	Complete
1*	Architecture diagram outlining the architecture of the entire ATTAINS system (version 1.0)	Within 20 business days of receiving technical direction from the TOCOR	Complete
1*	Process Diagram	Within 20 business days of receiving technical direction from the TOCOR	Complete
1*	Use Case Definitions (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR	Complete
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR	Complete
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR	To be completed in base period

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
1*	Lessons Learned	Within 10 business days of receiving technical direction from the TOCOR	Descoped
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly	To be completed in base period
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly	To be completed in base period
1*	Monthly Change Control Board Meetings	Monthly	To be completed in base period
1*	Weekly status meeting	Weekly	To be completed in base period
2*	Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of award	Complete
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR	Complete
2	Notification that changes are warranted related to QA	Within one business day of occurrence	To be completed in base period
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)	To be completed in base period
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)	To be completed in base period
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests	To be completed in base period
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests	To be completed in base period
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR	To be completed in base period

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR	To be completed in base period
3	Kick-off meeting for Task Order	Within 10 business days of award or as otherwise directed by the TOCOR	Complete
4*	Exchange Network node workflow requirements and design document v1	Within 20 business days of receiving technical direction from the TOCOR	Complete
4*	Recommended development approach	Within 20 business days of TOCOR acceptance of the requirements and design document	Complete
4	Business Rule Engine v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.	To be completed in base period
4	Rules Registry v1	Initial rules registry due within 20 business days of acceptance of the development approach and an updated rules registry is due within 15 business days following the release of an iteration.	To be completed in base period
4	ATTAINS Node v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.	To be completed in base period
4	Parse and Load Module v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.	To be completed in base period
4	Staging Tables Database v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.	Descoped
4	Exchange Network Query and Solicit Services v1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2016; or as specified by the TOCOR.	To be completed in base period

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
4	Software code for Exchange Network components v1	Delivered to the EPA TFS upon delivery of each software component.	To be completed in base period
4*	Flow Configuration Document v1	Within 60 business days of award, or as specified by the TOCOR	To be completed in base period
4	Final ATTAINS Schema v1	Within 60 business days of award, or as specified by the TOCOR	To be completed in base period
4	Example XML Files v1	Within 60 business days of award, or as specified by the TOCOR	To be completed in base period
5*	Database requirements and design document	Within 20 business days of receiving technical direction from the TOCOR	Complete
5	Entity Relationship Diagram v1	Draft due within 30 business days of acceptance of requirements and design document. Updates due within 10 business days of receiving technical direction from TOCOR.	Complete
5	Mapping of data elements (in DET) to corresponding fields in the database v1	Within 30 business days of receiving technical direction from TOCOR	To be completed in base period
5*	Proposed approach for security model	Within 20 business days of receiving technical direction from TOCOR	Complete
5*	Proposed approach for reporting, archiving, and ensuring data integrity to ensure the system can act as the 'system of record'	Within 20 business days of receiving technical direction from TOCOR	Complete
5	Final database v1	Draft due within 60 business days of acceptance of Entity Relationship Diagram. Updates due with each iteration of the ATTAINS Cloud Interface. Final due on April 1, 2016.	To be completed in base period
6*	Product back-log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.	To be completed in base period
6*	Design screens and use cases	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.	Complete
6	Incremental functional releases of the ATTAINS Cloud Interface	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR.	Complete

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
6	Incremental update of ATTAINS system documentation	Within 10 business days of each iterative release of the ATTAINS Cloud Interface.	Complete
6*	Documented process for populating ATTAINS preproduction backend database from production database	Within 30 business days of receiving technical direction from the TOCOR.	To be completed in base period
6*	Documented process for provisioning user credentials for ATTAINS	Within 30 business days of receiving technical direction from the TOCOR.	To be completed in base period
6	Final ATTAINS Cloud Interface	April 1, 2016, unless otherwise directed by the TOCOR.	To be completed in base period
6	Software code for ATTAINS Cloud Interface v1.0	Delivered to the EPA github upon delivery of each software component.	To be completed in base period
7*	Requirements and design document for ATTAINS public interface and web services	Within 20 business days of receiving technical direction from the TOCOR	Descoped – moved to Option Period 1
7*	Product back log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.	Descoped – moved to Option Period 1
7*	Proposed approach for ATTAINS public interface	Within 20 business days of TOCOR acceptance of the requirements and design document	Descoped – moved to Option Period 1
8*	Training materials for classroom training and online training	Within 45 business days of receiving technical direction from the TOCOR	Descoped – moved to Option Period 1
8*	Online help for ATTAINS Cloud Interface	Within 30 business days from each iterative release of the ATTAINS Cloud Interface, with the final online help released at the same time as the final ATTAINS Cloud Interface.	Descoped – moved to Option Period 1
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training	Descoped – moved to Option Period 1

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1
8	Support for pilot states	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.	To be completed in base period
8	Lessons Learned Document describing the lessons learned from the pilot	Within 30 business days from completion of the pilot.	Descoped – moved to Option Period 1
8	Data migration of historical data	Within 60 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1
8	Node plug-in for OpenNode2	Within 90 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1
8	Proposed approach for supporting a node plug-in for other Exchange Network Nodes	Within 30 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1
8*	Community Forum page within ATTAINS Cloud Interface	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1 and updated within 10 business days of direction from TOCOR.	To be completed in base period
8*	Frequently Asked Questions as part of the Community Forum	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1 and updated within 10 business days of direction from TOCOR.	To be completed in base period
8*	Conference trip reports	Within 10 business days of completing the travel.	Complete
9	Queries and reports supporting WQ-27 and WQ-28	With each iterative release of the ATTAINS Cloud Interface, and with the final release on April 1, 2016, unless otherwise specified by the TOCOR.	To be completed in base period
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR.	To be completed in base period
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the.	To be completed in base period
9	Queries and reports testing new approaches for SP 10 and SP 11	Within 60 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE	Status
9	Proposed approaches for supporting other measures (SP-12, SP-13, WQ-29, WQ-10, and Urban Waters)	Within 30 business days of receiving direction from the TOCOR.	To be completed in base period
10*	Deployment of CIP and QA tool within contractor environment	Within 30 business days of award	Complete
10	Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.	Complete
10	Processed and QA'd national layer of waters with TMDLs	Within 20 business days of receiving direction from the TOCOR.	To be completed in base period
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.	To be completed in base period
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.	To be completed in base period
40	Updates to CIP Tool	Within 30 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1
40	Updates to the QA Tool	Within 30 business days of receiving direction from the TOCOR.	Descoped – moved to Option Period 1

*These tasks may begin work prior to approval of the QAPP.

OPTION YEAR 1 (June 1, 2016-May 31, 2017):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Project Charter	Updated charter due within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Project Management Plan	Updated plan due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Baseline schedule for the project and any updated schedules	Updated schedule due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Risk and issues registers	Within 15 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Architecture diagram outlining the architecture of the entire ATTAINS system (version 1.1)	Within 20 business days of receiving technical direction from the TOCOR
1*	Process Diagram	Within 20 business days of receiving technical direction from the TOCOR
1*	Use Case Definitions User Stories (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR
1*	Lessons Learned from base period	Within 10 business days of receiving technical direction from the TOCOR
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly
1*	Monthly Change Control Board Meetings	Monthly
1*	Weekly status meeting	Weekly
2*	Updated Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of beginning of the option period.
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR
2	Notification that changes are warranted related to QA	Within one business day of occurrence
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR
3	Kick-off meeting for Task Order	Within 10 business days of beginning of the option period or as otherwise directed by the TOCOR.
4*	Exchange Network node workflow requirements and design document v1.1	Within 20 business days of receiving technical direction from the TOCOR
4	Business Rule Engine v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Rules Registry v1.1	Initial rules registry due within 20 business days of acceptance of the development approach and an updated rules registry is due within 15 business days following the release of an iteration.
4	ATTAINS Node v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Parse and Load Module v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Staging Tables Database v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Exchange Network Query and Solicit Services v1.1	Iteration 1 due within 60 business days of acceptance of the development approach. Iteration 2 due within 60 business days of acceptance of testing of iteration 1. Iteration 3 due on April 1, 2017; or as specified by the TOCOR.
4	Software code for Exchange Network components v1.1	Delivered to the EPA TFS upon delivery of each software component.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
4*	Flow Configuration Document v1.1	Draft updates delivered with each iteration with the final document due December 15, 2016, unless otherwise directed by the TOCOR.
4	Final ATTAINS Schema v1.1	Draft updates delivered with each iteration with the final schema due December 15, 2016, unless otherwise directed by the TOCOR.
4	Example XML Files v1.1	Draft updates delivered with each iteration with the final xml files due December 15, 2016, unless otherwise directed by the TOCOR.
5*	Database requirements and design document	Within 20 business days of receiving technical direction from the TOCOR
5	Entity Relationship Diagram v1.1	Draft due within 30 business days of acceptance of requirements and design document. Updates due within 10 business days of receiving technical direction from TOCOR.
5	Mapping of data elements (in DET) to corresponding fields in the database v1.1	Within 30 business days of receiving technical direction from TOCOR
5	Final database v1.1	Draft due within 60 business days of acceptance of Entity Relationship Diagram. Updates due with each iteration of the ATTAINS Cloud Interface. Final due on April 1, 2017.
6*	Product back-log	Within 45 business days of award and updated within 5 business days of direction from the TOCOR.
6*	Design screens and use cases -user stories	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
6	Incremental functional releases of the ATTAINS Cloud Interface v1.1	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR.
6	Incremental update of ATTAINS system documentation	Within 10 business days of each iterative release of the ATTAINS Cloud Interface.
6	Final ATTAINS Cloud Interface v1.1	April 1, 2017, unless otherwise directed by the TOCOR.
6	Software code for ATTAINS Cloud System v1.1	Delivered to the EPA github upon delivery of each software component.
7*	Product back-log	Updated product back-log due within 30 business days of receiving direction from TOCOR.
7*	User Stories for the Public Web Interface	Within 20 business days of receiving technical direction from the TOCOR
7*	Proposed approach for ATTAINS public interface	Within 20 business days of TOCOR acceptance of the requirements and design document

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
7	Public web pages for site specific 305(b)/303(d)/TMDL, etc.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December February 15, 2016, unless otherwise directed by the TOCOR.
7	Web pages for measures reporting	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December February 15, 2016, unless otherwise directed by the TOCOR.
7	Geospatial data published to EPA's Geoplatform via web services	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December February 15, 2016, unless otherwise directed by the TOCOR.
7	Software code for ATTAINS Public Interface	Delivered to the EPA github upon delivery of each software component.
8*	Training materials for classroom training and online training	Within 45 business days of receiving technical direction from the TOCOR
8*	Online help for ATTAINS Cloud Interface	Within 30 business days from each iterative release of the ATTAINS Cloud Interface, with the final online help released at the same time as the final ATTAINS Cloud Interface.
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.
8	Lessons Learned Document describing the lessons learned from the pilot	Within 30 business days from completion of the pilot.
8	Data migration of historical data	Within 60 business days of receiving direction from the TOCOR.
8	Node plug-in for OpenNode2	Within 90 business days of receiving direction from the TOCOR.
8	Proposed approach for supporting a node plug-in for other Exchange Network Nodes	Within 30 business days of receiving direction from the TOCOR.
8	Transition support for an additional 10 states to accelerate the state transition in preparation for 2018	Transition complete within 90 business days of kick-off call with each state.
8*	Updated Training materials for classroom training and online training	Within 45 business days of receiving technical direction from the TOCOR

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
8	Updated Node plug-in for OpenNode2 to support ATTAINS v1.1	Within 90 business days of receiving direction from the TOCOR.
8*	Updated Community Forum page within ATTAINS Cloud Interface	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1.1 and updated within 10 business days of direction from TOCOR.
8*	Updated Frequently Asked Questions as part of the Community Forum	Within 30 business days of first iterative release of the ATTAINS Cloud Interface v1.1 and updated within 10 business days of direction from TOCOR.
8*	Conference trip reports	Within 10 business days of completing the travel.
9	Queries and reports supporting WQ-27 and WQ-28	With each iterative release of the ATTAINS Cloud Interface v1.1, with the final release on April 1, 2017, unless otherwise specified by the TOCOR.
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR upon direction to proceed with a given state.
9	Queries and reports testing new approaches for SP-10 and SP-11	Within 60 business days of receiving direction from the TOCOR.
9	Queries and reports implementing new approaches for SP-10 and SP-11	Within 60 business days of receiving direction from the TOCOR.
9	Queries and reports for supporting other measures (SP-12, SP-13, WQ-29, WQ-10, and Urban Waters); measures to be supported with be directed by the TOCOR.	Within 30 business days of receiving direction from the TOCOR.
10	Updates to Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	Updates to CIP Tool (plan for two iterations of updates)	Within 30 business days of receiving direction from the TOCOR.
10	Updates to the QA Tool (plan for two iterations of updates)	Within 30 business days of receiving direction from the TOCOR.

*These tasks may begin work prior to approval of the QAPP.

OPTION YEAR 2 (June 1, 2017-March 27, 2018):

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
1*	Project Charter	Updated charter due within 20 business days of award and update plan within 5 business days of receiving direction from TOCOR
1*	Project Management Plan	Updated plan due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Baseline schedule for the project and any updated schedules	Updated schedule due within 20 business days of the beginning of the option period and update plan within 5 business days of receiving direction from TOCOR
1*	Work Breakdown Structure (WBS) of work at a level of detail suitable for the project size	Within 20 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Risk and issues registers	Within 15 business days of beginning of the option period and updated schedules within 5 business days of receiving direction from TOCOR
1*	Use Case Definitions User Stories (for use during Agile Sprints)	Within 10 business days of receiving technical direction from the TOCOR
1*	Configuration Document	Within 20 business days of receiving technical direction from the TOCOR
1	Test Plan – in accordance with QAPP	Within 20 business days of receiving technical direction from the TOCOR
1*	Lessons Learned	Within 10 business days of receiving technical direction from the TOCOR
1*	Financial and Progress Reports showing planned and actual expenses and estimated completion (reported in EPM and to TOCOR via report)	Monthly
1*	Burn-down, velocity, or other charts and items used to depict Agile software development progress	Monthly
1*	Monthly Change Control Board Meetings	Monthly
1*	Weekly status meeting	Weekly
2*	Updated Draft Quality Assurance Project Plan (QAPP) that integrates the contract-level Acceptable Quality Levels (AQLs) from the contract	Within 20 business days of beginning of the option period.
2	Final Quality Assurance Project Plan (QAPP) that incorporates EPA feedback	Within 10 business days of receiving comments from the TOCOR
2	Notification that changes are warranted related to QA	Within one business day of occurrence
2	Formal QA/QC Section	To be included in each major deliverable (as defined in Task 2)
2	Written Monthly QA Report	To be included in the Monthly Progress Report (See Section D)

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
2	Reports outlining the outcomes of testing as part of the Test Plans	Within 5 business days of completion of performing tests
2	Outputs from Integration Testing, ensuring that components all work with one another	Within 5 business days of completion of performing tests
2	Running list of issues and potential enhancement requests	Updated list to be provided at each biweekly status call or within 1 business day upon request from the TOCOR
2	Written report of any logic and code reviews, and upon TOCOR request, provide the code for EPA review	Within 5 business days of completion of the code review, and code to be provided to EPA for review within 2 days of the request from the TOCOR
3	Kick-off meeting for Task Order	Within 10 business days of beginning of the option period or as otherwise directed by the TOCOR.
4	Maintenance of Exchange Network Components, including maintaining code in EPA TFS.	Any updates to the Exchange Network components will be deployed within 30 business days of receiving technical direction from the TOCOR
5	Maintenance of ATTAINS database Components, including maintaining code in EPA TFS.	Any updates to the ATTAINS database components will be deployed within 30 business days of receiving technical direction from the TOCOR
6	Maintenance of ATTAINS Cloud Interface, including maintaining code in EPA TFS.	Any updates to the ATTAINS Cloud Interface components will be deployed within 30 business days of receiving technical direction from the TOCOR
7*	Product back-log	Updated product back-log due within 30 business days of receiving direction from TOCOR.
7*	Design screens and use cases for each use case (to conform with ATTAINS version 1.1, to support an API, and to support a queryable public interface) with approaches for integrating across the use cases.	Within 30 business days of direction from TOCOR and updates within 15 business days of direction from the TOCOR.
7	Updated public web interface to accommodate changes from ATTAINS version 1.1	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.
7	Public Application Program Interface (API) and web services supporting programmatic retrieval of ATTAINS data.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
7	Queryable interface for downloading ATTAINS data.	First iteration due within 60 business days from approval of the design screens and use cases, or approval of the QAPP, whichever is later. Each subsequent iteration will be scheduled by the TOCOR. Final delivery will be by December 15, 2017, unless otherwise directed by the TOCOR.
7	Software code for ATTAINS Public Interface	Delivered to the EPA TFS upon delivery of each software component.
8*	Completed training questionnaires and summary of responses	Within 5 business days of completing the training
8*	ATTAINS Transition Strategy	Within 30 business days of receiving direction from the TOCOR.
8	Support for remaining states	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the.
8	Maintain Node plug-in for OpenNode2 to support ATTAINS v1.1	Any updates to the Node Plug-In will be deployed within 30 business days of receiving technical direction from the TOCOR.
8*	Maintain Community Forum page within ATTAINS Cloud Interface	Any updates to the Forum will be deployed within 30 business days of receiving technical direction from the TOCOR
8*	Maintain Frequently Asked Questions as part of the Community Forum	Any updates to the FAQs will be deployed within 30 business days of receiving technical direction from the TOCOR
8*	Conference trip reports	Within 10 business days of completing the travel.
9	Maintain measures queries and reports.	Any updates to the measures queries and reports will be deployed within 30 business days of receiving technical direction from the TOCOR.
9	Support state development of priority areas	Support completed for each state within 30 business days from receiving technical direction from the TOCOR, or as specified by the.
9	Support state development of GIS materials in support of the measures	Support completed for each state within 60 business days from receiving technical direction from the TOCOR, or as specified by the TOCOR.
10	Updates to Standard Operating Procedures (SOPs)	Within 30 business days of approval of the QAPP.
10	Final processed and QA'd state geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	State source geospatial data sets in standard RAD format	For each data set received, within 8 business days of receiving data and direction from the TOCOR.
10	Updates to CIP Tool	Within 30 business days of receiving direction from the TOCOR.

Task # or PWS Section #	BENCHMARK, DELIVERABLE or MILESTONE	SCHEDULE
10	Updates to the QA Tool	Within 30 business days of receiving direction from the TOCOR.

*These tasks may begin work prior to approval of the QAPP.

D. REPORTING

All documentation and reporting under this Task Order shall be in compliance with contract requirements. See contract clause F.2, F.3, and J.2 "List of Attachments, Number 2 - Reports of Work".

The contractor shall prepare and furnish each month to the TOCOR a written summary of work performed, and progress towards the schedule of benchmarks, deliverables, and milestones which has been accomplished each month. The contractor shall also include in this item a brief written summary of any challenges encountered in the appropriate month.

In addition, the contractor shall identify and briefly describe in the written monthly report those QA / QC activities which were performed to support implementation of this task order, and furnish a brief written description of: problems encountered, and any deviations were occurred from: the QMP, any existing QAPP, any SOP's, checklists, or other QA guidance, as well as a description of the corrective actions taken.

E. CONTRACTOR IDENTIFICATION

Contractor personnel shall always identify themselves as Contractor employees by name and organization and physically display that information through an identification badge. Contractor personnel are prohibited from acting as the Agency's official representative.

The Contractor shall refer any questions relating to the interpretation of EPA policy, guidance, or regulation to the TOCOR.

F. TRAVEL

All performance, documentation and reporting of Contractor Travel under this Task Order shall be in compliance with contract requirements. Reference Contract Clause H-18.

G. VALIDATION OF TASK ORDER DELIVERABLES FOR SECTION 508 COMPLIANCE

The Contractor shall support the TOCOR in conducting a "Final Deliverable Validation" to ensure compliance with Section 508 and the Federal Acquisition Regulations (FAR) related to "electronic and information technology (EIT) deliverables". The Contractor shall furnish certification, in writing, to the TOCOR that the Contractor has complied with EPAAR Clause 1552.211-79 "Compliance with EPA Policies for Information Resources Management" (Reference Contract Clause C-1), including the requirement that all electronic and information technology (EIT) deliverables be Section 508 compliant in accordance with the policies referenced at <http://www.epa.gov/accessibility/> . Reference Contract Clause C-1 (c).

H. CONFERENCE/MEETING GUIDELINES AND LIMITATIONS

No single event over \$20,000 is anticipated in connection with this Task Order. The contractor shall immediately notify the EPA Contracting Officer, Contract Level COR, and TOCOR of any anticipated event involving support for a meeting, conference, workshop, symposium, retreat, seminar, or training that may potentially incur \$20,000 or more in cost during performance. Conference expenses are all direct and indirect costs paid by the government and include any associated authorized travel and per diem expenses, room charges for official business, audiovisual use, light refreshments, registration fees, ground transportation and other expenses as defined by the Federal Travel Regulations. All outlays for conference preparation should be included, but the federal employee time for conference preparation should not be included. After notifying EPA of the potential to reach this threshold, the Contractor shall not proceed with the task(s) until authorized to do so by the Contracting Officer.

I. QUALITY ASSURANCE SURVEILLANCE PLAN

Per contract requirements.